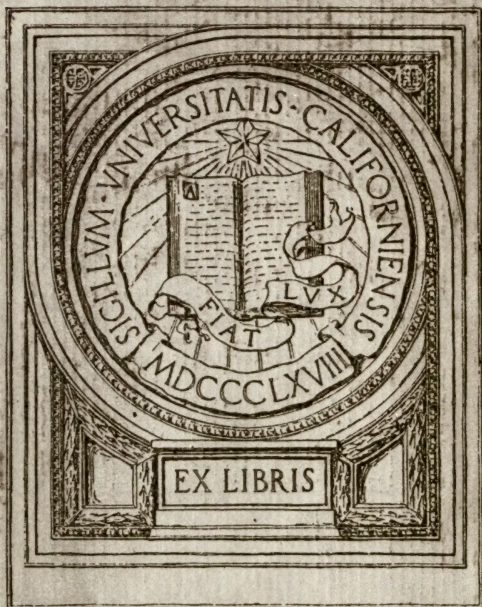




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THE
BIRDS OF SOMERSETSHIRE.

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THE
BIRDS
OF
SOMERSETSHIRE.

BY
CECIL SMITH,
OF LYDEARD HOUSE, NEAR TAUNTON.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

M.DCCC.LXIX.

TO WHOM IT MAY COME

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PREFACE.

I AM quite aware that a good deal has been written about the uselessness of mere local ornithological histories, and perhaps to a certain extent rightly, as a mere list of the birds that fly over or occasionally visit any particular county is certainly of very little use; but, on the other hand, some account of the nature and habits of the various birds belonging to a county, or even to a smaller division, such as a parish, cannot help being interesting to the inhabitants, especially perhaps to the younger portion of them; for Ornithology, and indeed all Natural History, begins, like Charity, at home: the boy chases the butterfly in his own garden, or robs the bird's nest in his father's shrubbery or orchard,—perhaps makes a collection of the objects that mostly excite his attention,—and thus an interest in these subjects first arises; and for this reason some account of the various species he is likely to meet with, and of their habits and propensities, is sure to be acceptable: therefore, as there is no History of the Birds of Somerset at present in existence, I shall make no apology for writing one, but only wish that the subject had fallen into the hands of one with more spare time to enable him to do justice to it. Indeed I should not have taken it up

at all had I not been requested to contribute to a local periodical ('Eyes and No Eyes') which was then being brought out at Taunton, under the auspices of Mr. Tuckwell, the Head Master of the Taunton College School.

Before regularly commencing my notes I think it may be as well to mention a few subjects generally applicable to many of the species hereafter noticed. First perhaps of these, the subject of migration strikes one as the most prominent. We may I think very fairly divide migration into two classes, regular and irregular; the regular migration being that great movement that takes place twice every year at certain definite seasons; in the spring, when the birds, departing from their winter quarters move northward, and spread themselves over a wide expanse of country, many of them reaching even beyond the arctic circle; and in the autumn, when they return with their young broods to the warmer and more genial climates in which they pass the winter. Many of these birds remain with us throughout the whole of the summer or winter, as the case may be; others pay us only a passing visit in the spring and autumn, continuing their journey further north and south. Most of our rarer chance visitants belong to this great band of regular migrants, but their usual line of flight being to the east or west of these islands they only pay us accidental visits, either owing to being blown out of their ordinary course by strong gales occurring at the time of

migration or owing to getting mixed up with flocks of our own regular visitants in what has been a common breeding ground, and accompanying them.

By irregular migration I mean the exceptional movements of some birds that cannot be considered as usually belonging in any way to the great migratorial band, and of others which, although they may be considered migratory, do not perform their journeys with the same punctuality as the regular migrants.

Perhaps the best example of the first of these exceptional movements may be found in that wonderful migration of the Sand Grouse, who, leaving their own homes on the plains of Tartary, migrated westward in immense numbers, some of them reaching as far as Ireland; some even passing further were probably lost in the Atlantic. Although these birds came from the East the first occurrence recorded in these islands was at Tremadoc, in Wales, on the 9th of July, 1859; a few others made their appearance during that year, but the real great immigration did not take place until the year 1864. In the May of that year these birds made their appearance in great numbers, especially in the eastern counties; from thence they spread themselves throughout the whole country. General as this migration was I cannot find that any of these birds made their appearance in this particular county, although many specimens were obtained in the neighbouring counties of Devon, Dorset, Wilts and Gloucester. A very full account of this migration is to be

found in Mr. Newman's edition of 'Montagu's Dictionary,' under the title "Grouse, Sand, Pallas'."

Of the second kind of irregular migration the Common Crossbills may be taken as an instance, as they are very curious in their migratory movements, being apparently quite regardless of all consideration of time or regularity, making their appearance sometimes at one time of the year and sometimes at another, and sometimes only after a lapse of several years, occasionally remaining to breed in their temporary home.

Another peculiarity incidental to a good many different species is their various changes of plumage: this change of plumage, which I have referred to more particularly in my notice of each species, has often puzzled the ornithologist, and led in many ways to the multiplication of species. The difference between the young birds and the old has been a fruitful source of error: in some instances this difference disappears after the first moult; in others, as in the Gulls, many years elapse before the full adult plumage is attained: the difficulty of identification has no doubt in many instances been increased by the likeness of the young birds to the mature females; but these difficulties have now been overcome by observations made at the breeding stations, by specimens having been obtained in various states of change, and in many instances by the birds having been kept tame till they had gone through all their various changes.

A cause of great variation of plumage in the same bird at different times of the year is the wearing off of the margins of the feathers, which in many cases are so broadly margined just after the moult with a perfectly different colour to the body of the feather that identification is extremely difficult. The Wheatear, the Snow Bunting and the Brambling may perhaps be selected as the best examples of this change. Another great change in plumage is effected in a very different manner, the feathers themselves remaining, but perfectly changing their colour in the spring, when the time arrives for the bird to assume its finest dress or "*habit des noces*," as the French call it: this change takes place gradually, but quickly, and certainly when complete considerably metamorphoses the appearance of the bird. Somewhat allied to this change is the extraordinary change that takes place in the plumage of the males of many of the Ducks immediately after the breeding season, when they lose their usual brilliant dress and assume one much more resembling that of the females: there always, however, appears to be a sufficient difference to enable any one to distinguish between the males and females.

On the subject of food, which perhaps is the most interesting to us as tending most to our profit or loss, I think I have been sufficiently particular in my notes of the various species, and therefore shall say no more here,

except to beg of my readers not to condemn even the most mischievous of our feathered friends or enemies without fairly examining the facts on both sides.

The arrangement I have adopted is that of Yarrell, with one exception, the Wren, which I have restored to its original place amongst the Sylviadæ, where it seems much more properly to belong than to the Climbers. This arrangement does not seem to me to be entirely satisfactory, but it is certainly as good as any of the others that have been promulgated, and is on the whole much better known. It divides our British birds into five great Orders: one of these five Orders is subdivided into four separate parts; each of these divisions, as well as the remaining four Orders, is divided into families or groups. A tabular arrangement of the whole will be found on the next page.

Of all these groups or families I have been able to include representatives, with the exception of the Strathionidæ or Bustards, but some, of course, are much more fully represented than others.

Those who desire to see figures of the birds I have described are referred to Yarrell's and Meyer's histories of British Birds, to both of which I have repeatedly referred in the following notes.

C. S.

Lydeard House, Taunton,
September, 1869.

TABULAR ARRANGEMENT OF ORDERS, &c.

ORDER.	DIVISION.	FAMILY OR GROUP.
Raptores		Vulturidæ
		Falconidæ
		Strigidæ
Insessores	Dentirostres	Laniadæ
		Muscicapidæ
		Merulidæ
		Sylviadæ
		Paridæ
		Ampelidæ
		Motacillidæ
		Anthidæ
	Conirostres	Alaudidæ
		Emberizidæ
		Fringillidæ
		Sturnidæ
		Corvidæ
	Scansores	Picidæ
		Certhiadæ
		Cuculidæ
	Fissirostres.	Meropidæ
		Halcyonidæ
		Hirundinidæ
		Caprimulgidæ
Rasores		Columbidæ
		Phasianidæ
		Tetraonidæ
		Struthionidæ
Grallatores		Charadridæ
		Gruidæ
		Ardeidæ
		Scolopacidæ
		Rallidæ
		Lobipedidæ
Natatores		Anatidæ
		Colymbidæ
		Alcadæ
		Pelicanidæ
		Laridæ

THE
BIRDS OF SOMERSETSHIRE.

ORDER RAPTORES.—*Family VULTURIDÆ.*

EGYPTIAN VULTURE, *Neophron Percnopterus*. Of the two Vultures which have been included, both perhaps on rather slight grounds, in the number of British birds, we have to include the Egyptian Vulture in the list of Somersetshire birds, one specimen having been killed in October, 1825, by the Rev. A. Mathews, on the Quantock Hills, near the village of Kilve. Another bird nearly similar in appearance was observed at the same time, but though it remained in the neighbourhood a few days after its companion was killed, it appears to have been too shy to allow itself to be approached within gunshot.

I do not think it necessary to give a description of this bird, as it has so very slight a claim to be included even in the list of British birds.*

* Since writing the above, I see another specimen has been taken in England, but not in this county. See 'The Zoologist' for 1868 (Second Series, p. 1456).

Family FALCONIDÆ.

WHITETAILED EAGLE, *Haliaeetus albicilla*. Of the Falconidæ we may include as many as thirteen out of the twenty recognized British species in the list of Somersetshire birds. The present species, the Whitetailed Eagle, I include on the authority of Yarrell, who says that "Specimens have been killed in Hampshire, Devonshire, Somersetshire and Shropshire," and in several other counties in England, and of Montagu, who gives a description of one that was killed on the Mendip Hills: he says it was a very small bird, probably a male, and "that its talons were blunt, as if worn in confinement;" so this bird after all may only be an escape. But since that time another specimen has been killed at Stolford, a place near the sea between Burnham and Quantock's Head, also famous for the only Somersetshire specimen of the Crane. I have not seen this specimen, but I have been informed by several people who have that it is a very fine mature bird.

This bird does not appear to be very particular in the matter of food, taking either fish, fowl* or flesh: amongst sheep and lambs† it commits a good deal of damage. Yarrell seems to think it is particularly partial to venison, and especially fawns, being occa-

* Seen feeding on a Gull (Zool. for 1864, p. 8875.)

† Zool. for 1864, p. 9126.

sionally killed in deer parks and forests: he also says it has been seen to feed on seals. The nest is always placed amongst high rocks and cliffs: it is composed of a large mass of sticks and apparently lined with soft materials.

In this species the males, as in many of the Falconidæ, are larger than the females: "The beak and cere, or naked skin at the base of the beak, are yellow; irides straw-yellow; the head and neck brownish ash, made up by a mixture of yellowish white and brown, the shaft of each feather the darkest part; body and wings dark brown, intermixed with a few feathers of a lighter colour; primaries nearly black; tail entirely white and slightly rounded in form, the middle feathers being the longest; the legs and toes yellow; claws black." The young birds "have the beak dull horn-colour, cere yellowish brown; irides brown; the plumage more uniform in colour and darker; the tail-feathers dark brown."* In this state it is the Sea Eagle of Bewick and other authors. This bird may be distinguished at any age from the Golden Eagle by the tarsus, which in that bird is feathered to the junction of the toes, and in this only half way down.

The eggs are of a white ground colour, occasionally tinged with very little red colour.

* Yarrell, p. 29.

OSPREY, *Pandion Haliæetus*. The Osprey is a bird much better known in our county than either of the two last-mentioned species; nevertheless it is still a very rare bird. An occasional specimen has been killed at the Sandhill, Chargot, Combe Sydenham, and other neighbouring ponds. There is a very fine specimen in the museum of the Archæological Society at Taunton, which was killed at Chargot Lodge, in October, 1859. This is probably a young bird of the year, or else one killed soon after the moult, each feather of the back scapulars and wing-coverts being narrowly but very distinctly edged with yellowish white, which differs from the description of Yarrell, quoted below. The peculiarity above remarked is also noticed by Montagu* in describing an Osprey killed in November: he says that it has the "plumage much brighter, the upper parts darker, being dusky brown, and all the feathers on those parts, even the quills, are slightly tipped with yellowish white." He also mentions another killed in October, which is similar in appearance.† This difference in plumage probably arises, as suggested above, either from the specimens so marked being young birds of the year,

* Montagu's Dictionary, by Newman, p. 212. See also 'The Zoologist' for 1863, p. 8841.

† I have recently received one for my collection from North Devon, shot in September: it is in similar plumage.

which, where there is any difference from the adult, are generally more marked; or from their having been shot immediately after the autumnal moult, before the edges of the feathers had been worn down, which, as I shall hereafter have occasion to notice, makes a material difference in the appearance of many of our birds killed at that time.

The food of the Osprey seems to consist almost entirely of fish: these it catches if they are near the surface by just dipping its feet in the water far enough to reach them, and at other times plunging entirely under the surface with force sufficient to throw up a considerable spray. But it emerges again so quickly from the water that it is evident it cannot attack fish swimming at any great depth.* It appears even to have been trained for taking fish.

The nest is said to be an immense fabric of rotten sticks, intermixed with corn-stalks, sea-weed and wet turf: it is lined with dry sea-grass,† and is generally placed in some old ruin—Yarrell says, if possible, on the top of a chimney: if ruins are not to be found old trees are sometimes resorted to.

Yarrell describes this bird as follows:—"The beak is black, the cere blue; the irides yellow; the top of the head and nape of the neck whitish,

* Yarrell's and Meyer's British Birds.

† Hewitson.

streaked with dark brown, the feathers elongated. The whole of the upper surface of the body and wings dark brown; the ends of the wing-primaries black; the upper surface of the feathers of the tail waved with two shades of brown; the chin and throat white; across the upper part of the breast a few feathers tinged with light brown forming a band; the under surface of the body, the thighs and under tail-coverts white; legs and toes blue; claws long, of nearly uniform length, crooked, sharp and solid, colour black; the under surface of the toes covered with short sharp spines, admirably adapted for holding a smooth and slippery prey." According to Hewitson's plate, the egg appears to be of a dull whitish brown ground, much browner at the longer end, thickly blotched and spotted with dark reddish brown, the blotches being much longer at the thick end.

PEREGRINE FALCON, *Falco Peregrinus*. The Peregrine Falcon, in consequence of the destructive propensities of gamekeepers, is becoming very scarce throughout England. A few pairs, however, continue to breed in different parts of this county. One pair, I have been informed, bred (and I believe continue to breed) on Brean Down, near Weston-super-Mare.

I have occasionally seen the Peregrine Falcon in the neighbourhood of Burnham: once when on the look-out for wading birds on Stert Island I saw a large hawk, I believe a Peregrine, but I was not near

enough to recognize it with certainty, make a dash at a flock of Purres; the Purres immediately opened right and left and made a broad passage for the hawk, who went completely through the flock, but failed in catching one.

In the days of falconry the Peregrine Falcon was, with the exception of the Gyr Falcon, the most esteemed and sought after for that sport. Various technical names were given it, according to its age and sex; the female Peregrine, being the larger and more powerful bird, was exclusively called the Falcon; the male, which, as in most of the Falconidæ, is much smaller and less powerful than the female, is called the Tercel, Tiercel or Tiercelet. The young birds were called Red Falcon or Red Tiercel, according as they were male or female, and the very young when in their down or nest-feathers were called Eyases.

The food of the Peregrine Falcon consists mostly of various species of birds, as Pigeons, Partridges, Ptarmigan, Grouse, Ducks, and various species of Sea-fowl, which form a plentiful supply when its nest or eyrie is established, as it frequently is, amongst the precipitous cliffs on the sea coast, which are also selected by these birds as a breeding station; rabbits and young hares also seem to form a part of its food.* The nest is usually placed on

* Yarrell, p. 44.

some precipitous rock, and Meyer says occasionally in high pine trees: it is a slight affair, made of dry sticks.

The following descriptions are taken from a young male, or Red Tiercel, and an adult female in my own collection, the former shot in this county, the latter at Seaton. Bill blue; cere dull greenish yellow; irides hazel; the front part of the forehead whitish with some long black hairs; head brown, feathers edged with lighter yellowish brown and white; a dark brown band making a sort of moustache extends from the base of the beak part way down each side of the throat; the throat itself white, narrowly streaked with brown; nape brown, with a few almost white feathers, making a sort of collar; all the upper parts dark brown, each feather narrowly edged with light rusty brown; tail dark brown, each feather spotted rather than barred with rusty, tips nearly white; all the under parts brown, each feather very broadly margined with yellowish white and white, giving it more the appearance of those colours than brown; quills dusky; legs greenish yellow. Adult female: Bill blue; cere yellow; irides yellow; head, nape, back scapulars and wing-coverts bluish ash, barred with darker; rump and tail-coverts lighter bluish ash than the rest of the back, barred more narrowly with dark; tail barred with two shades of bluish ash, tips of the feathers white; quills dusky; as in the case of the young bird, a

moustache, only darker, extends from the base of the bill part way down each side of the throat; the throat itself and the upper part of the breast white, with a few longitudinal dark streaks; all the under parts dirty white, transversely barred with dark rusty; legs and feet yellow.

The eggs are mottled all over with reddish brown on a paler ground, but they differ both in size and colour, Hewitson says, according to the age of the bird.

HOBBY, *Falco subbuteo*. The Hobby, which is a migratory species, arriving in April and departing in October, is a very rare bird in these parts; at least I have never seen one about here alive, or been able to obtain a specimen in the flesh, nor have I ever noticed it hung up in the gamekeepers' larders amongst the rest of what they call "feathered vermin," though I never pass such a place without a close scrutiny. It does, however, occasionally occur, as appears from the various stuffed specimens at different houses in the neighbourhood, and a great number of skins left by Mrs. Turle, the birdstuffer at Taunton, all of which she had probably obtained from neighbouring gamekeepers.

The food of the Hobby consists mostly of small birds, such as Larks, Swallows and Martins, and even Swifts: it also takes Quails, young Partridges, Sandpipers and Plovers: insects, such as cock-chaffers, also form part of its food; these it pursues

until late in the evening and takes on the wing. Although Partridges are mentioned, the Hobby does not seem to be a great enemy of the gamekeeper, as it usually contents itself with much smaller prey.

The Hobby does not seem to trouble itself much about building a nest for itself, usually taking possession of that of a Crow or Magpie, especially if placed near the top of a high tree :* it has also been known to place its nest on the projecting ledge of a rock.

The Hobby is something like a miniature Peregrine, the general colouring being much the same, and it also having the same conspicuous moustache. The beak is blue; cere yellow; head, neck, part under the eye and ear-coverts dark dusky blue, each feather having a darker line in its centre; a moustache extends from the base of the bill, the same as in the Peregrine; throat white; a sort of greyish white collar extends part of the way round the back of the neck, all the rest of the upper parts dark slate-grey; quills and tail dusky; breast and belly white, longitudinally streaked with broad streaks of dusky; elongated feathers on the thighs and under tail-coverts light rusty orange, with some dark streaks, which the very old bird is said to lose; under side of the tail light grey, barred with a

* Hewitson.

darker shade; legs yellow. The above description is taken from an adult bird in my own collection. "The young birds have the legs paler in colour; the cere and orbits almost white, sometimes intermixed with blue; head, neck and all the upper parts dusky, with rust-coloured and yellowish edges."*

The eggs of the Hobby, the Merlin and the Kestrel are so much alike that unless the bird is seen and recognized on the nest it is almost impossible to tell by the eggs alone to which of the three species they belong. In buying eggs, therefore, the purchaser is almost at the mercy of the seller, and will probably get three different varieties of Kestrel's eggs, but will have to pay a higher price for those said to be Hobby's or Merlin's.

MERLIN, *Falco aesalon*. The Merlin is also a very uncommon bird in this part of the county. I only know of one having been killed near here, and that I saw shot in this parish when I was a boy: it is now in my collection, and in very good preservation. The following description of the adult male is taken from it. In the wild part of the county to the westward, it is, I believe, more common, and it may be so also on the Mendips.

The Merlin is considered to be a winter visitor to the southern counties of England, but certainly breeds in the more northern ones.

* Meyer's British Birds, vol. i, p. 46.

The nest seems to be usually placed amongst cliffs: it is a slight structure of heather, dead weeds and dry grass: it is also found on the ground amongst heather.*

The food of the Merlin consists mostly of small birds: it has, however, been seen in chase of House Pigeons, and occasionally kills one, but its strength appears insufficient to carry off so heavy a prey. Snipes also seem special favourites: so fond does the Merlin appear to be of these that it has been known to accompany persons snipe-shooting, and chase the missed or wounded birds. Mr. Blake-Knox says that if the Snipe was shot and the Merlin could catch it before it reached the ground it invariably did so, but if it reached the ground the hawk never touched it: he adds, "When the hawk would leave the bog, so might I—the Snipe were all flushed."†

The adult male has the bill bluish lead colour; cere yellow;‡ irides brown; fore part of the forehead white, streaked with black; head bluish, mixed with rusty and streaked with black, a small light

* Zool. for 1864, p. 9317.

† Id. 1866, Second Series, p. 221.

‡ Mr. Saxby says (Zool. 1865, p. 9519), adult males have the cere, tarsi and feet deep gamboge-yellow, tinged more or less with orange; but in all the young birds and adult females he has examined those parts have always been pale sulphur-yellow.

streak over each eye; nape reddish rusty, with a black streak in the centre of each feather; all the rest of the upper parts bluish grey, with a narrow black streak in the centre of each feather; quills dusky, very slightly tipped with dirty white; tail bluish grey, slightly barred with a darker shade, a broad black band at the end, tips whitish; throat white, with a few narrow dark streaks; under parts orange rusty, streaked and spotted with brown and white; elongated feathers on the thighs the same, narrowly streaked with brown.

The female is very different in appearance, as will appear by the following description, which I have taken from Meyer's 'British Birds:—
"The grey colour, which is so prevalent in the plumage of the male, is only perceptible in that of the female upon the scapulars and wing-coverts, where it occupies the centre of each feather: these feathers are bordered with rufous and have black shafts. The greater coverts of the wing and the upper coverts of the tail are brown, bordered with dirty yellowish white. The tail is greyish brown, tipped with yellowish white and crossed with fine yellow-white bars. The throat is plain white; the ring round the neck, the breast and under parts are yellowish white, streaked and spotted with dusky; nape of the neck and thighs tinged with rufous. The crown of the head and nape are rich reddish brown, with dusky streaks down the shafts of the feathers;

forehead and streak above the eye yellowish white ; the ear-coverts grey and brown. The young male birds much resemble the female above described, but have no grey in the centre of the feathers on the upper parts, these being dark brown, bordered with rufous."

As to the eggs, I have only to make the same remark which I have made with regard to those of the Hobby.

KESTREL, *Falco Tinnunculus*. The Kestrel is the commonest hawk in these parts, and is still very numerous, in spite of the persecution of the game-keepers, in whose larder it is constantly to be found, though perhaps it does not do them so much mischief as they suppose : it does, however, undoubtedly do some mischief, and is fully aware that young partridges and pheasants are good eating.

This hawk is very docile, and easily tamed, even when taken in full maturity. I had one lately which I shot in December, 1863 : as it was only slightly wounded in the wing, I brought it home alive, and kept it till the autumn of 1867 : it very soon became quite tame, and would take food from the hand. It would eat raw meat, but much preferred birds and mice—certainly birds, for choice, rather than anything else. The size of the bird* seemed to be no

* Has been known to kill and eat a Hooded Crow.—
'Zoologist' for 1868 (S. S. p. 1067).

objection, as it would readily take a Wood Pigeon, eat as much as it could, and try to hide the rest. Starlings were the only birds I knew it refuse; it would, however, eat a Starling rather than starve. If more food was given than it could eat at one time, it would hide what it did not want in a corner of the cage, and try to bury it by rubbing the sand in a heap on it with its bill, much as a dog will do with a bone under similar circumstances. It generally plucked its birds tolerably clean before it ate them, but not so clean as to prevent it swallowing a great many feathers: these, as well as the bones and the hair or fur of animals, like all hawks, it brings up in small oblong pellets. The casting of these pellets was, I think, necessary to the health of the bird; for when it had been fed on raw meat for some time it ceased to bring up the pellets, and at such times always seemed to mope and to be generally out of condition. In giving this hawk a bird or mouse, I observed that it always took it in its foot and immediately gave it a sharp gripe with its beak across the back of the neck or the head, which must prove instantly fatal.

Rats also seem to form part of the food of the Kestrel; for on one occasion I disturbed one when busily engaged at his dinner behind some ricks. Seeing him fly off with something in his feet, I followed him up and got nearly within shot of him, when he rose again with the same thing in his feet.

I fired, and he dropped his prey: I went up, and found it to be the remains of a half-grown rat. It also eats various insects, as the remains of Coleopterous insects, their larvæ, and earth-worms have been found in its stomach; and Mr. Selby says he has seen one of these birds engaged in hawking after cockchaffers late in the evening: watching him with a glass, he saw him dart through a swarm of these insects, seize one in each claw, and eat them while flying.

The Kestrel seems to select a variety of places for a nest, such as high rocks, towers and old ruins: it also builds in trees, on these occasions taking possession of the nest of a Crow or Magpie; but it is not always successful in gaining possession of the nest, for I remember when I was a boy seeing a great fight for a nest between a pair of Kestrels and a pair of Magpies, and the Magpies retained their possession.

The plumage of the male Kestrel differs considerably from the female. The following description of the male is taken from a specimen in my collection; that of the female from the tame bird before mentioned:—Beak blue; cere yellow; irides hazel; fore part of the forehead and the throat light buff; head and neck bluish grey, the centre of each feather narrowly streaked with dusky; back, scapulars, wing-coverts, secondaries and tertials brick-dust red, a small triangular spot of dusky near the tip of each

feather (very old birds gradually lose these dusky marks, and the whole of the upper parts become plain brick-dust red); tail-coverts bluish grey; tail the same, with a broad bar of dusky near the end, tips of the feathers white, shafts black; quills dusky, very narrowly edged with yellowish white; breast light buff, slightly tinged with bluish grey, in the centre of each feather a narrow streak of dusky, broader at the base; belly buff, spotted with dusky; elongated feathers on the thighs and the under tail-coverts buff; legs yellow.

The plumage of the female is as follows:—Head and neck reddish brown, streaked with dusky; part under the eyes and the ear-coverts nearly black; back and scapulars brick-dust red, not so bright as in the male, with broader dusky triangular spots; secondaries and tertials the same ground colour, only barred with dusky; quills dusky, edged with dull white; tail-coverts dull bluish grey, barred with dusky; base of tail-feathers the same; centre of the feathers the same as the back, barred with dusky, a broad bar of dusky at the end; tips dirty white; all the under parts dull buff, streaked with dusky in centre of each feather.

Young males of the year resemble the females; young birds from the nest are funny little balls of white down.

The eggs of this species vary much, and, as I before remarked, may easily pass for those of the

Merlin or Hobby: in general the ground colour is a sort of yellowish white, so much blotched with various shades of rusty brown as to show very little of the ground colour. Some again are minutely speckled with yellowish rusty, hardly showing any of the ground, which itself is more rufous than the others. Some almost entirely sepia-brown, showing very little of a lighter ground. They vary in size, both in length and breadth.

SPARROWHAWK, *Accipiter Nisus*. The Sparrowhawk is nearly, but not quite, as common in this county as the Kestrel, and is much more destructive, both in the poultry-yard and in the game-preserve: it is also much wilder and more difficult to tame.

I once tried to keep an adult female that had been slightly wounded, but found her of a very different disposition to the Kestrel, as she would beat herself about in the cage on the approach of anyone, even of those who were in the habit of giving her food, and in this way at last killed herself. She lived long enough, however, to show one decided difference to the Kestrel in her choice of food, as she never showed any dislike to Starlings, but would eat them quite as readily as any other small birds that were offered to her. Sparrowhawks have, however, been tamed and broken in for hawking, even after having been taken in an adult state; for Sir John Sebright says he once

took a Partridge with a Sparrowhawk of his own breaking, ten days after it had been taken wild from a wood.*

The female Sparrowhawk is a much stronger and bolder bird than the male, and in rearing these birds from the nest it is said the males should be separated very early from the females, otherwise the females are sure to destroy and devour the males. To show the power of the female Sparrowhawk I may relate the following anecdote, which was told me by a friend:—His keeper was out in the evening roosting in Wood Pigeons, when a cock Pheasant went up to roost nearly over his head: soon after the Pheasant had settled on his branch a Sparrowhawk made a dash at him and struck him to the ground: both birds fell together, and a severe fight ensued, which would probably have ended in the victory of the Sparrowhawk had not the keeper put an end to the fight by shooting the hawk. Hunger could hardly have driven the hawk to attack so large a bird, as it was afterwards sent to me, and on examining its stomach I found it quite full, containing, amongst other things, the legs, toes and claws of a Missel Thrush, which had probably made its last meal.

Once when fishing in the pond here I saw a House Sparrow save himself most adroitly from the attack

*. Yarrell, vol. i., p. 75.

of a Sparrowhawk: the Sparrow was flying across the pond when the hawk made a swoop at him; perceiving the hawk just in time, the Sparrow at once dropped close to the surface of the water: down came the hawk so close that his wings touched the water. The Sparrow, however, escaped, the hawk not being able, for fear I suppose of a ducking, to make his swoop effectual.

We may judge of the rapacity of the Sparrowhawk from the following notice:—A brood of young birds of this species were taken and placed in a cage, and in two days the old hawks brought them ten birds, namely, two young Peewits, two young Thrushes, a Sky Lark, a Meadow Pipit, two young Chaffinches, a Willow Wren, and another newly-hatched squab.* Nobody seems to have much to say in favour of the Sparrowhawk, but perhaps it may occasionally do a little good, as mice may be added to its list of food, and Meyer says insects, such as cockchaffers and grasshoppers.

The nest of the Sparrowhawk is generally placed in a tree, the deserted nest of a Crow or Magpie being frequently made use of.

The plumage of the Sparrowhawk differs much, according to age. In the adult bird the bill is blue; cere greenish yellow; irides yellow; all the upper parts are bluish grey, except a small white band on

* See 'Zoologist' for 1865, p. 9440.

the back of the head and two white spots on the tertials; throat white, running into yellowish rusty on the sides; breast and all the under parts nearly white, transversely marked with frequent short bars of yellowish rusty; under tail-coverts white; tail bluish grey, barred with dusky. The general colouring of the upper parts of the young birds is dark brown, the feathers being more or less broadly bordered with rusty; throat white, streaked with brown; under parts something like the mature bird, but much darker, in consequence of the transverse bars being much broader and of a darkish brown colour; tail brown, barred with darker, each feather narrowly edged with rusty; quills dusky; shafts rusty, and in a few of the feathers the outer web rusty; the legs are yellow in all. The young nestlings are covered with white down, much like young Kestrels.

The eggs of the Sparrowhawk are much less liable to be mistaken than those of the last three species. The ground colour is a sort of light green (which in preserved specimens fades almost to white, and quite so if they are kept much in the light), more or less blotched with rich red-brown: size nearly the same as those of the Kestrel.

KITE, *Milvus vulgaris*. The Kite is now becoming very rare throughout England, its size rendering it conspicuous to keepers and others who wish for its destruction. It is said to take its prey principally

from the ground; therefore hares, rabbits, and even lambs, occasionally form its food as well as young birds: however, to make up in some degree for these mischievous propensities, it will also eat mice, worms, and even snakes. It also, in a manner, fulfils the duties which in warmer climates devolve upon the Vulture, as it feeds on carrion and all sorts of offal, which it will even sweep from the surface of the water with great dexterity.* While on the subject of the food of the Kite, I may observe that it is also said to take fish from the water.† It is also said occasionally to visit the poultry-yard, but as it is not a very plucky bird, hens sometimes succeed in protecting their young and driving off the intruder. It is easily kept in confinement, and attains a great age; one account, in the ‘Zoologist,’ says as much as forty years.

“The nest is formed of sticks, and lined with various soft materials: it is usually placed in the forked branch of a tree in a thick wood.”‡

Not having a Kite in my own collection, and I am afraid not having much chance of getting one, I have taken the following description from Meyer’s ‘British Birds’ :—“The adult male has the beak black at the tip, bluish towards the base; cere yellow; irides

* Montagu’s Dictionary, by Newman.

† Yarrell, vol. i., p. 79.

‡ Id., p. 81.

silver-white, acquiring a yellow tinge in old birds ;* the entire head and throat whitish grey, lightest on the forehead and chin, the shafts of the feathers black ; in some specimens the head inclines more to rufous than grey (this is probably the case in young birds) ; the feathers of the head and neck are acuminate, as well as those of the breast and tippet ; the quill-feathers and larger coverts of the wings are blackish brown ; all the rest of the upper plumage reddish brown, the central part of each feather dusky ; the feathers of the breast and under parts are reddish orange, darkest upon the thighs ; those of the breast are marked with a streak of fine black, bordered with white ; the tail and upper coverts are of the same orange colour as the breast, with dark shafts ; the outer feathers dusky along the edge and crossed with dusky lines ; the tail-feathers beneath reddish white, with seven or eight indistinct bars of a dusky colour showing through from above ; legs and toes yellow ; claws black. The female has nearly the same coloured markings as the male."

The egg of the Kite is something like that of the Buzzard, next to be described, except that the spots are darker and more distinct.

* The irides of some I saw at the Zoological Gardens were white, very slightly tinged with pale yellow.

COMMON BUZZARD, *Buteo vulgaris*. The Common Buzzard must at one time have been very plentiful in this part of the county, as it continues to resist the attacks of the gamekeepers, and still remains in some numbers. I have had, within the last few years, several specimens sent me by the late Mr. Esdaile, which had been trapped by his keeper at Cothelstone. I have also seen a good many in the flesh at Mrs. Turle's, some of which had been sent from the neighbourhood of Monksilver, and some from that of Pixton. I have also occasionally seen a Buzzard when out hunting on the Quantocks, so it seems to be tolerably widely spread over the western part of the county.

I do not much wonder at keepers endeavouring to wage a war of extermination against the Buzzard, as it is undoubtedly a destructive bird to all sorts of game, taking its food, like the Kite, from the ground. Montagu says of this bird that it never pursues its prey on the wing, but is contented with young hares, rabbits and feathered game: in default, however, of such food, it will eat carrion, and even worms and beetles, and occasionally snakes.* Yarrell takes notice of the same peculiarity in the Common Buzzard which I have remarked in the Kestrel, namely,

* A blind snake and a mole only found in the stomach. See note by Mr. E. H. Rodd, in the 'Zoologist' for 1865, p. 9417.

that in confinement it will, when satisfied, hide the rest of its food. He also notices another very extraordinary peculiarity of the female Common Buzzard in confinement, namely, that she has been known to sit on hen's eggs and bring up a good brood of chickens,* but that upon one occasion, when given the young chickens ready hatched to bring up, instead of the eggs to sit upon first, she ate them all.

The nest is either placed on some ledge of a steep cliff or rock, when it is made of twigs, heath, wool, and some other substances; or in the forked branches of some large tree, in which case the bird is apt to choose the forsaken nest of some other bird, which it repairs with the same materials as those already mentioned.†

The Buzzard varies much in plumage; I shall, however, describe that which appears to me the most usual:—Bill bluish horn; cere yellow; irides generally yellow; general colouring of the head and all the upper parts dark dull brown, most of the feathers bordered with yellowish white; throat, centre of each feather brown, more or less edged with white; breast brown; belly white, barred with brown; under tail-coverts white, with a few brown spots; primary quills dusky above; on the under parts the tips and outer

* For another well-authenticated instance of this, see the 'Zoologist' for 1865, p. 9686.

† Yarrell, vol. i., p. 90.

webs alone are dusky, the base of the inner web being white for nearly two-thirds of the length of the feather; under wing-coverts and flanks white and yellowish white, barred with brown; tail greyish brown, barred with brown.

The eggs of the Common Buzzard vary much in colouring; Hewitson says, according to the age of the bird, those of the first year being nearly white. The specimen I have before me is about the size of a hen's egg; ground colour greenish white, much blotched with two shades of rusty, one considerably brighter than the other, the second so light that it is scarcely to be distinguished from the ground colour.

ROUGHLEGGED BUZZARD, *Buteo lagopus*. The Roughlegged Buzzard is another very rare species in our county, and indeed throughout England, though on the Continent it appears to be as common as, if not more so than, the species last described, from which it may be immediately distinguished by the feathered tarsus.

I know of very few occurrences of this bird in Somerset: the one in my own collection was shot at Chargot Lodge, and purchased by me at the sale of Sir John Lethbridge's birds at Sandhill, in the catalogue of which sale it figured under the name of an Eagle. This bird has also been taken in the neighbourhood of Burnham, but the specimen taken there escaped, the gentleman who shot it having only

slightly wounded it, and being anxious to keep it alive, tied it to a tree in an orchard while he went into a farm-house for luncheon; when he came back of course the bird had escaped, nor could he find it again anywhere. I have no doubt, from the description given to me, that this was the Roughlegged Buzzard: moreover, the gentleman who shot it was perfectly competent to form an opinion on the identity of a bird so easily distinguished by its feathered legs.

The food of the Roughlegged Buzzard appears to be much the same as that of the Common Buzzard, namely, hares, rabbits, rats, mice, and other small quadrupeds, as well as some reptiles, such as lizards and frogs: it is, however, more enterprising on the wing, as it will take Wild Ducks and other large birds when pressed by hunger.

The nest is described as being a coarse edifice of sticks, moss and grass, loosely put together; was often on a fell ridge, often in a tree, but never down in the forest.*

This species differs occasionally in plumage; the description here given is taken from the one bought at the Sandhill sale: it agrees very nearly with those

* See a note by Mr. Wheelwright, in the 'Field,' reprinted in the 'Zoologist' for 1863, p. 8441. Mr. Wheelwright writes from Sweden, where these birds appear to be common in the spring.

described by Meyer and Yarrell; others, however, are occasionally of a darker colour. Bill bluish horn; cere yellow; irides light yellow; head and neck, both above and below, nearly white, streaked with light brown; back, scapulars, wing-coverts, secondaries and tertials light yellowish brown, each feather edged with yellowish white; primary quills dusky, more or less edged and tipped with white; tail yellowish brown, base of the feathers white, and tips white; breast white, streaked with yellowish brown; belly, upper parts of the thighs and flanks brown, making a broad band of that colour round the under part of the bird; under tail-coverts nearly white; elongated feathers on the thighs dirty white, barred with yellowish brown; tarsus feathered to the junction of the toes; feathers dirty white and yellowish brown; toes yellow.

The eggs of this species appear to be something like, and to vary much in the same way as, those of the Common Buzzard.

MARSH HARRIER, *Circus æruginosus*. All the Harriers are now becoming very scarce throughout the whole country: occasional notices of their occurrence appear in the 'Zoologist,' and other works of a similar nature, but they are generally very few and far between: the particular species now under consideration appears to be almost extinct in this county. The greater part of the few specimens I have ever seen of the Marsh Harrier that had

been killed in this county, were young birds in their first year's plumage, in which state they generally go by the name of "Black Hawks."

The food of the Marsh Harrier appears to consist principally of water birds, animals and reptiles: eggs may also be added to the bill of fare.

The nest is formed of small sticks, rushes or long grass: it is placed on the ground amongst long coarse grass, in a bunch of rushes, fern or furze, or at the base of a bush.*

This bird is a considerable time before it appears in full adult plumage, as will appear from the following descriptions:—In the young bird of the year the whole of the plumage is chocolate-brown, the feathers tipped with lighter reddish brown. In the second year the head, neck, chin and throat become dull yellow, with an occasional patch of the same on the carpus or anterior point of the wing: it is in this state of plumage that Bewick has represented the Marsh Harrier, under the name of the "Moor Buzzard." In the adult male the beak is bluish black; cere and irides yellow; the top of the head, cheeks and nape of the neck yellowish white, tinged with rufous and streaked with dark brown; the back wing-coverts and tertials dark reddish brown, with lighter margins; the primaries brownish black; the secondaries and all the tail-feathers ash-grey: this state of

* Yarrell, vol. i., p. 106.

plumage is not assumed till the third moult. Birds of a greater age assume more of the ash-grey colour, especially on the wing-coverts and tertials. The above descriptions are all taken from Yarrell.

Hewitson says the eggs of the Marsh Harrier, although for the most part white or slightly tinted with blue, are sometimes also spotted or smeared with brown, in the same manner as those of the Hen Harrier, to be next described.

HEN HARRIER, *Circus cyaneus*. The Hen Harrier, though at one time tolerably numerous, has now become, like the last species, almost extinct in this county; and probably, to judge by the stuffed specimens I have met with, as well as the occasional mention of its capture, is not, and never was, so common as Montagu's Harrier, the bird next to be described, though both have now, unfortunately, almost entirely disappeared.

The food of the Hen Harrier appears to consist principally of birds, of which it must destroy a good many, as would appear from the following note in the 'Zoologist' for 1866 (Second Series, p. 141):—"On dissecting a Hen Harrier I found in the stomach three pairs of legs of birds, one pair having belonged to a Sky Lark, the other two pairs to some smaller birds: there was also the bill of a Sky Lark and one of a Thrush." Small animals, as well as reptiles, appear to be nearly equally acceptable: of

the latter, Yarrell says, twenty lizards were found in the stomach of one killed near London.

The nest is placed on the ground, the materials used being only small sticks and short grass.*

The general plumage of the adult male Hen Harrier is pale ash-grey in the upper parts (except the tail-coverts and rump, which are white), including some of the larger quill-feathers, also the upper part of the breast. The first five quill-feathers are dusky and grey, or white towards the roots. The under parts of the plumage are pure unspotted white, including the under surface of the wings; a whitish ruff nearly encircles the face; on the nape is a patch of black and white chequered feathers; the beak is black; cere pale yellow; irides and legs bright yellow.†

The description of the female bird is taken from one in my own collection: Head streaked dark brown and reddish brown; a streak round and behind the eye nearly white; ear-coverts dark brown; ruff surrounding the face spotted dark brown and very light brown, almost white; a few whitish feathers on the nape, streaked with dusky; rest of the neck brown, each feather bordered with light rusty; back, scapulars, wing-coverts, secondaries and tertiaries brown, many of the feathers edged with

* Yarrell, vol. i., p. 109.

† Meyer's 'British Birds,' vol. i., p. 98.

dirty white; tail-coverts white; tail brown, with three bars of rusty, two centre feathers greyish ash, in the place of the rusty; tips of all the feathers rusty; throat brown, with white streaks; breast, belly and elongated feathers on the thighs light yellowish rusty, streaked with light brown, the centre of each feather being light brown; under tail-coverts yellowish white; primary quills brown, shafts rusty.

Young males are brown, like the female; they begin to change to blue in the second autumn: they are also smaller than the female.

The eggs are generally of a bluish white, occasionally slightly marked with yellowish brown, which agrees with the one in my own collection; in some specimens with more distinctly defined spots of light brown.*

MONTAGU'S HARRIER, *Circus Montagui*. Montagu's Harrier, or the Ashcoloured Harrier (*Circus cineraceus* of many authors), is, as I have before observed, not so rare in this county as the Hen Harrier: the two species are, however, frequently confounded. The last occurrence of this species that came under my own notice was a few years ago, when a pair of these birds, together with their nest and young, were taken by Mr. Bisset's keeper at Pixton: they were all preserved by Mrs. Turle, and are, I believe, still in Mr. Bisset's collection. I have

* See Hewitson.

also seen some specimens of this bird at Spring Grove, near which place I believe they were shot. One also was caught in a trap in the beginning of June, 1864, at Brean Down, near Weston-super-Mare, as recorded by the Rev. Murray A. Mathew, in the 'Zoologist' for 1864, p. 9209.

The habits and food of this species are the same in all respects as those of the Hen Harrier. The nest also, like that of that bird, is placed on the ground, generally amongst furze.*

In appearance, however, it may easily be distinguished from the Hen Harrier by its more slender form, for though equal in length it is not nearly so heavy, the average weight of Montagu's Harrier being about nine and a quarter ounces, that of the Hen Harrier about thirteen ounces. The wings are also longer in reference to the end of the tail, and the third quill-feather of the wing is much more pointed.† The length of the adult male is about seventeen inches; that of the male Hen Harrier about eighteen inches. The beak is nearly black; the cere greenish yellow: irides bright yellow; the head, the whole of the neck and all the upper parts bluish grey; the secondaries with three dark bars across, the last of which is visible when the wing is closed; primaries almost black; upper surface of the central tail-feathers bluish grey; side tail-

* Yarrell, vol. i., p. 116.

† Id., p. 115.

feathers white, barred with reddish orange; breast, belly and under tail-coverts white, with various longitudinal streaks of reddish orange; under wing-coverts barred with reddish brown; under surface of tail-feathers dull white, barred with dusky grey; leg and toes slender and yellow; claws black.

The adult female measures nineteen inches, the wing fifteen. The beak black; the cere dull yellow; irides hazel; crown of the head and nape reddish brown, with darker brown spots; above and below the eye a streak of dull white; ear-coverts dark brown; back and wings dark umber-brown; rump and upper tail-coverts mixed with white and orange-brown; upper surface of the central tail-feathers uniform dark brown; side tail-feathers barred with two shades of brown; breast, belly and all the under surface of the body light reddish brown, with longitudinal marks of a darker colour; legs and toes yellow; claws black. These descriptions are principally taken from Yarrell.

Hewitson says the eggs are white, tinted with light blue, but never spotted like those of the last species.

With Montagu's Harrier ends the list of the British Falconidæ.

Family STRIGIDÆ.

I now come to the last branch of the Raptorial Order, the Strigidæ, or Owls. Of these I have not been able to include so large a per-centage amongst the Somersetshire birds as I have of the Falconidæ, being only able to include four out of the eleven species at present recognized as British.

LONGEARED OWL, *Otus vulgaris*. The Longeared Owl is said to be not uncommon in the wilder parts of the county; indeed, in the West, it is said to be much more common than the shorteared species, next to be noticed: this, however, does not accord with my own experience, or with the relative numbers of the two species that are occasionally to be seen at the birdstuffers' shops at Taunton. The last of the present species that I have seen was brought into Mrs. Turle's on the 5th of November, 1864: it had been killed near Combe Sydenham.

The Longeared Owl is resident with us all the year, but in consequence of its retired and nocturnal habits is seldom seen.

On the subject of food, I shall have, for the first time, to quote a paper which appeared in the 'Zoologist' for the year 1863 (p. 8760), on the "Food of Small Birds," which gives a notice of the contents of the stomachs of eighteen different species of birds

during each month of the year. These stomachs and their contents had been prepared and exhibited at the Exhibition of 1862, by M. Florent Prevost, with the object of showing the incalculable benefit rendered to man by birds, in devouring those creatures which destroy or damage his crops. This paper may, I am sure, be read with advantage by gamekeepers and gardeners, as well as by the promoters of clubs for the destruction of small birds. On the food of the species now under consideration, M. Prevost says: "January, mice; February, the same; March, the same; April, cockchaffers; May, rats, squirrels and cockchaffers; June, meal-worms, beetles and shrew-mice; July, mice, ground and other beetles; August, shrew and other mice; September, mice; October, the same; November, the same." To all M. Prevost's monthly lists additions may no doubt be made, though no subtractions, as all the contents of the stomachs mentioned were proved by dissection. To the present list may be added small birds, which it is said to obtain by taking them off their roost.*

The old nest of a Magpie or of a Crow is the situation generally selected for the nest of this bird.† Yarrell says the old drey of a squirrel is occasionally chosen.

* Yarrell, vol. i., p. 132.

† 'Magazine of Zoology,' vol. ii., p. 389.

In plumage this is a very handsome bird, though somewhat difficult to describe minutely, on account of its extremely varied and mottled appearance. The exposed part of the beak is black; irides orange-yellow; immediately round the base of the beak, and hiding it, are white feathers, mixed with a few long hair-like black feathers; face brownish orange; tips of the feathers freckled with brown and grey; feathers edging the facial disk brownish orange and dark brown; long feathers making the ear-tufts dark brown in the centre, edged with brownish orange and light buff, almost white on the upper parts and inside; forehead yellowish brown, and brown and white freckled; head and nape streaked with brownish orange and brown; all the upper parts minutely spotted and speckled with the same three colours; breast brownish orange, streaked with dark brown and spotted with white; legs and toes rather lighter brownish orange, extreme ends of the toes bare; quills light yellowish brown, barred with dark brown; tail the same; claws rather long, curved, sharp and black.

The eggs are white, and much resembling, both in size and shape, those of the Shorteared and of the Barn Owl.

SHORTEARED OWL, *Otus brachyotos*. The Short-eared Owl, during the time of its stay, is certainly more numerous than the last-mentioned species. This, though a few may probably remain to breed in

the northern part of the kingdom,* is a migratory species, arriving about the middle of October and retiring again towards March. The greater numbers seem generally to be taken in October and November, at which time they are found in the turnip-fields and long grass, and ferny or rushy places. They never perch, but always sit humped up on the ground, crouched away under the covert. At times these Owls seem to make their appearance in much greater numbers than usual, the cause of which unusual appearance has been traced to an equally unusual increase in the number of mice: on one occasion this seems to have been the case near Bridgwater, mice having appeared there in such vast quantities as to destroy a large portion of the vegetation, and in that autumn a very great number of Shorteared Owls resorted to that part in order to prey upon them.†

I again have recourse to M. Prevost's series for the food of this species: he says—"January, mice; February, harvest mice; March, mice; April, crickets and field mice; May, shrew mice and cockchaffers; June, beetles; July, field mice and birds; August, field mice and shrews; September, field mice and beetles; October, the same; November, common

* They have been known to breed as far south as Norfolk. See Yarrell, vol i., p. 137.

† Montagu's Dictionary, by Newman.

and field mice; December, mice, spiders and woodlice." The Shorteared Owls do not appear by any means to limit their bird-eating propensities to the month of July, for Montagu says he received one in the month of November, in the stomach of which were the remains of a Sky Lark and a Yellow-hammer. The mere fact, however, of these birds preying on birds at different times of the year hardly detracts from the value of M. Prevost's notice, which still shows the immense quantities of mice devoured by these birds at all times of the year, and the consequent benefit both to the farmer and to the gardener.

The nest is said to be placed upon the ground amongst heather; the bottom is scooped until the fresh earth appears, on which the eggs are placed, without any lining or covering.*

The Shorteared Owl differs much in appearance from the Longeared, the general colouring being much lighter. The bill is dark horn-colour; irides brilliant orange-yellow; the face is nearly black round the eye, yellowish white and black beneath the eye, the rest nearly white, grizzled with black; the border of the facial disk speckled light buff and brown; ear-tufts brown, margined with light buff; head streaked light buff and brown; nape and back the same, but with broader streaks; scapulars, wing-

* Yarrell, vol. i., p. 157.

coverts and tertials irregularly spotted and marked with the same two colours and white; rump and tail-coverts buff, faintly marked with pale brown; primary quills pale chestnut, barred with dark brown, towards the end dark brown and speckled ash-grey and white; tail barred and spotted buff (very light buff, almost white) and brown; breast streaked light buff and brown; rest of the under parts light buff, with a very few narrow brown streaks on the shafts of the feathers; under tail-coverts the same, but paler; legs and toes feathered nearly to the claws, light buff; claws dark horn.

The eggs of this species are white, and very like those of the Barn and Longeared Owls, both in size and shape.

WHITE or BARN OWL, *Strix flammea*. This well-known species is, I am glad to say, still tolerably common, though, like all the rest of our Raptorial birds, it suffers a good deal of persecution, the more undeserved in the case of this and the other Owls, as, on account of their nocturnal habits, they are not likely to do very much damage either to the game-preserve or to the hen-roost, as the young chickens either are or ought to be shut up, and the young of the game-birds are generally hovered by the time the Owls begin their search for food.

The Barn Owl is the last of the Owls mentioned by M. Prevost, in his series, and according to him this poor bird does not rejoice in any great variety

of diet:—"January, mice; February, the same; March, field mice; April, the same; May, the same; June, the same; July, mice; August, the same; September, field mice and shrews; October, the same; November, mice and black rats; December, mice." There is certainly a great sameness about this dietary-table, but the Barn Owl does undoubtedly allow himself a little more variety than would here appear; common rats, as well as mice and small birds, certainly forming a portion of his food at all times; and Yarrell, on the authority of a note in the 'Magazine of Natural History,' adds fish to the list. He also says that this bird when satisfied will hide the remains of its food, like the Kestrel and the Buzzard.

The Barn Owl, it is said, screeches, but does not generally hoot. It is said to make no nest, but to deposit its eggs in the hole of a wall.

The appearance of this bird is so well known as scarcely to need description. I have, however, added a general description from two specimens in my own collection, as it calls attention to a slight peculiarity not perhaps generally noticed. The beak is white; irides bluish black; the facial disk is white, except a patch of rufous before the eyes, the feathers surrounding it yellowish buff, on the under part of the face tipped with darkish brown; all the upper surface yellow, more or less mottled with grey and white; tail yellowish buff, barred with brown and tipped

with mottled grey and white; quills much the same; breast, in one specimen slightly tinged with yellowish buff, in the other pure white; rest of the under parts pure white, with a few brown specks; tarsus feathered, white; toes bare, except a few long dirty white hairs on the upper parts; claws brown. Yarrell notices the yellowish, or, as he calls it, fawn-coloured, tint on the breast of some specimens, which, he says, on dissection generally prove to be females or young males.

The eggs of this species, which much resemble those of the two last, are quite white; length about an inch and a half, and breadth about a quarter of an inch less.

BROWN or TAWNY OWL, *Syrnium stridula*. A more common species in these parts than the last, though, owing to its duller colouring and more retired habits, not so frequently seen. It is resident with us, and chiefly inhabits thick woods and plantations of ever-greens.

The food of this species embraces a greater variety than that of the Barn Owl, as besides mice its dietary-table includes moles, frogs, beetles and other large insects; occasionally also young hares and rabbits. Yarrell adds fish to the list of food, saying that this bird is able to catch either those that swim near the surface in deep water, or such as are found in the shallowest parts of small streams. One I kept tame showed also, at a very tender age, a decided

partiality for young Partridges ; but, in spite of these poaching propensities, one anecdote is told by Yarell of this bird, which ought to entitle it rather to the protection of the gamekeeper than to his persecution : it is as follows :—A pair of Brown Owls brought up their brood in a tree near a Magpie's nest, with which birds they had constant fights ; at last the remains of the young Magpies were found under the Owls' tree, and in one instance the head and feathers of one of the old Magpies.

The eggs are placed in a hole in a tree, in which moss and feathers are collected, but not sufficiently arranged to bear the designation of a nest.

The Brown Owl varies a good deal in plumage, according to age and sex. Young birds taken from the nest are frightful little balls of grey down, not at all resembling the description of her young ones given by the Owl to her friend the Eagle, in the fable of Lafontaine :

“ Mignons

Beaux bienfaits et jolis sur tous leurs compagnons.”

In the adult bird the beak is whitish horn-colour ; the eyes large ; irides dark blue, almost black ; facial disk white, mixed with yellowish brown, a few black hairs round the beak ; feathers forming the edge of the disk white, yellowish brown and brown ; head and neck streaked yellowish brown and dark brown ; all the upper surface yellowish brown, much streaked

and mottled with dark brown; primary quills barred brown and light yellowish brown; tail much the same; breast and belly dull white, streaked and barred with brown and yellowish brown; legs and toes feathered, white, with a few brown streaks; claws white at the base, dark at the tips. In the young bird of the year the facial disk is more mottled, and the feathers making the edging darker brown and white; head and nape streaked brown and dull yellowish white; the upper parts have not so much of a yellow tinge as in the adult; a white streak down the scapulars; a few white spots also on the greater wing-coverts; breast immediately under the disk, white with a few dark brown streaks; rest of the under parts white, streaked and barred with two shades of brown. They differ, however, in plumage at all ages: Meyer says fawn-coloured birds are young females; reddish brown, young males; reddish grey, old females; and pale grey, adult males.

The eggs of this species are white, like those of the three last, but are considerably larger.

This is the last of the Raptorial order of birds which I shall be able to include in this list; and in concluding my remarks on this, the first of the five great Orders, I may say that I am afraid that nearly the whole of the different species included in it are more or less rapidly becoming extinct, not in this

county alone, but throughout the kingdom—sacrificed to the gamekeepers and to the rage for battue-shooting. That the game-preserver and his keeper are not always doing the best for their own cause by the total destruction of these birds I think will appear from the short notices I have been able to give of the food of the different species, and in some cases they are doing absolute mischief to themselves as well as to the farmer by this destruction, which allows the increase of various insects and animals mischievous to both.

ORDER INSESSORES.—*Div.* DENTIROSTRES.

Family LANIADÆ.

I now come to the second great Order, namely, the Insectorial, or perching birds. This is by far the largest of the five, containing as many as one hundred and forty-seven recognized British species; it is itself divided into four Divisions, the first of which is the Dentirostres, or soft-billed birds, which contains as many as sixty-nine British, out of which I am able to include forty-four Somersetshire species. The Laniadæ, or Shrikes, come first in order; of these there are three, or perhaps four,* British species, of which I can include two.

* See some notes in various numbers of the 'Zoologist.'

GREAT GREY SHRIKE, *Lanius excubitor*. The Great Grey Shrike is a rare species, especially in this county, only two Somersetshire specimens having come under my notice: the first of these was killed on the Nynehead estates, and its capture was recorded by the Rev. Murray A. Mathew, in the 'Zoologist' for 1863: he says, "It was shot on the Nynehead estate in November, 1862, by a labourer, who gave it to his children to play with; afterwards, as it became rather stale, it was thrown away on the dung-hill, from whence it was rescued by Mr. Sanford's keeper, luckily before it was too stale for preservation: it is now in the possession of Captain Sanford." The other occurred near Wiveliscombe, on the 31st of March, 1864, and is recorded by myself, in the 'Zoologist' for that year (p. 9048): it is a very fine specimen, and is now in the collection of Mr. Bidgood, the Curator of the Museum of the Taunton Archæological Society.

This bird is generally an accidental winter visitant in England, most of the specimens having been taken from October to March inclusive: it has, however, occurred in a few instances in the summer months.

The food of the Great Grey Shrike consists principally of mice, shrews, small birds,* frogs, lizards

* The remains of a Blue Tit were found in the stomach of one of these birds (Zool. for 1865, p. 9455). The Blue Tit seems to be a favourite food, as there are two other notes in the 'Zoologist' of its being seen feeding on it.

and large insects: these it generally fixes, after it has killed them, in a forked branch or sharp thorn, the more readily to pull them to pieces, as do all the birds of this family.

This bird builds in trees, making a nest of bents, roots and moss, lined with down and wool.*

In the old male the upper mandible is black, with a projecting tooth near the point of the beak, which is considerably curved; under mandible yellowish brown at the base, becoming brownish black at the end; the nostrils hid by black hairs; irides very dark brown; space from the beak to the eye, a narrow streak under the eye, and from thence a broad patch to the ear-coverts, black; immediately above this a small streak of white; head, neck, back and rump pearl-grey; some of the scapulars and the tail-coverts much paler, nearly white; wing-coverts black; primary quills black towards the points, white at the base; secondaries the same; tertials black, tipped with white; the four centre feathers of the tail black; the next feather on each side tipped with white, which colour occupies more space on each feather towards the outside, the outside tail-feathers being almost wholly white; all the under parts are white; legs, toes and claws black. Females resemble the males, except that the colours of the

* Yarrell, vol. i., p. 169.

plumage are not so pure, and the dull white of the breast is marked with numerous greyish semilunar lines. Young males resemble females.

This species is not known to breed in England; but the eggs are said to resemble those of the Redbacked Shrike, next to be described, except that they are considerably larger.

REDBACKED SHRIKE, *Lanius collurio*. The Redbacked Shrike is much more common with us than the last species, being a regular (though rather late) summer visitor, not arriving in this country till the end of April or beginning of May, at which time it may frequently be seen perched on the top of some bush, or on the highest twig in a hedge, like the Stonechat. The top of a direction-post near here I have also observed to be a favourite spot.

The food of this bird is much the same as that of the Great Grey Shrike; but, being a smaller bird, it naturally feeds more on the insect and less on the animal and bird part, though it will take birds as large as a Yellowhammer: like the last bird, too, it fixes its food on thorns and branches, which has given rise to the Latin family name of *Lanius*, or Butcher: both these birds are locally known by the name of "Butcher Bird." They eject the hair, feathers and indigestible part of their food in pellets, like Hawks and Owls.

The nest is usually placed in a thick bush or hedge; it is made of coarse stalks of plants outside,

with some moss and fibrous roots within, and is lined with bents and a few hairs.

The male Redbacked Shrike is a handsome conspicuous bird. The beak is black, with a notch in the upper mandible, like the Great Grey Shrike; round the base of the beak black hair-like feathers; a black streak extends from the base of the beak round the eyes, including the ear-coverts; forehead greyish white; head and neck bluish grey; back, scapulars and wing-coverts rusty red; tail-coverts same as the head and neck; the two central tail-feathers black; the rest white at the base, the other part black; throat white; breast and belly white, tinged with peach-colour; under tail-coverts white; primary quills dusky, with very slight rusty red edges; secondaries and tertials the same, with broader rusty red edges; legs, toes and claws black.

The female has the beak dark brown; head and neck rusty brown; back, scapulars, wing and tail-coverts rusty red, not so bright as in the male; tail brownish rusty, with no white; all the quills much the same as the male, but not quite so dark; throat dirty white; a streak on the side of the throat, and all the under parts dirty white, with dusky semicircular lines; under tail-coverts dirty white.

Young males are like the females, except that they have dark semicircular marks on the back as

well as on the under parts: this I believe to be common to both the young males and females.

The eggs have a sort of light greenish ground, with darker spots, making a sort of broad zone near the larger end: some have a more rufous tinge, both in the ground colour and the spots. Hewitson says the zone of spots is sometimes near the narrow end: I have never seen this variety myself.

Family MUSCICAPIDÆ.

Of the family of Flycatchers I am only able to include two in this list, out of the four now usually considered as British.

SPOTTED FLYCATCHER, *Muscicapa grisola*. The Spotted Flycatcher, though by no means one of the earliest, may be considered one of our most numerous summer visitors. I have generally noted the appearance of this bird in these parts between the 4th and the 9th of May: its stay is short with us, as it leaves again earlier than many other of our summer birds. It is a most familiar little bird, frequenting our gardens, and making its nest in the creepers against our houses, and in our summer-houses.

I once found a Spotted Flycatcher's nest in a summer-house, on a little corner of matting that had accidentally been twisted down: this, however,

proved a treacherous foundation, for though it did very well for some time, yet when the bird began to sit steadily the weight gradually bent the matting, till at last both nest and eggs slipped off. Yarrell mentions one of these birds having built on the angle of a lamp-post in the streets of Leeds, and another which built on the top of a lamp in Portland-place.

The Spotted Flycatcher constructs a neat little open nest, apparently of the materials that come easiest to hand, such as moss of various kinds and colours, leaves, bents of grass, roots, &c., lined with horse or cow hair or feathers.

The food of the Spotted Flycatcher appears to be exclusively insects, and it may be seen all day perched on a twig, or iron railing, or a croquet-hoop is sometimes a very favourite perch, from whence it darts upon every insect that comes within sight. It is accused, though certainly wrongfully, of eating cherries and raspberries, as it frequents those fruit-trees for the sake of the insects that also frequent them; and though many of these birds have been killed in these trees, and their stomachs examined, no remains of fruit have ever been found. From the accusation of killing bees it is probably less easy to defend them. Gardeners, who are something like gamekeepers in their appreciation of the usefulness of birds, accuse these as well as all the rest of our summer visitors of fruit-eating: my own gardener,

I know, calls them all "Whitethroats," and says he can keep nothing for them.

The Spotted Flycatcher is so well known that a very slight description will be sufficient. The beak is darkish horn; eyes hazel; head streaked dark greyish brown and white; all the rest of the upper parts light greyish brown; the greater wing-coverts and tertials are a rather darker shade, narrowly edged with lighter; primary and secondary quills and tail the same darker shade; throat and breast white, streaked with the same colour as the back; rest of the under parts white; legs, toes and claws black.

The Spotted Flycatcher probably derives its name of "spotted" from the young birds, which are really spotted, each feather on the upper parts having a buff-coloured tip; and the ends of the greater wing-coverts form a wood-brown bar across the wing.

The ground colour of the egg of the Spotted Flycatcher is a sort of dull green; it is, however, so much smeared and speckled with dull brick-dust red that the ground colour can scarcely be seen. These eggs vary a good deal, both in marking and shape: in some eggs I took from one nest the ground is a light green, with only a few smears of very light brick-dust; one was without any smears at all: the eggs in that nest varied much from the usual shape, being nearly round instead of oblong.

PIED FLYCATCHER, *Muscicapa atricapilla*. Though a very rare bird, especially in this county, the Pied Flycatcher is in some parts of England a tolerably regular summer visitor. I am not myself aware of more than one specimen having been procured in this neighbourhood, and that was killed, some years ago, close to Taunton, by Mr. Haddon, in whose collection it now is.

In food and general habits it much resembles the last-mentioned species; the principal difference seems to be in the choice of a place for its nest, which is usually placed in a hole in a decayed or pollard tree: it is made of roots, grass, dry leaves, bents and hair.

This is a very conspicuous bird, and one, when once seen, not easily mistaken, in consequence of its distinct black and white colour. The adult male has the beak black, with a spot of white over its base on the forehead; irides dark brown; upper part of the head and neck dark brownish black; back of a decided black; wing primaries and secondaries brownish black; edges of the greater wing-coverts and the outer webs of the tertials pure white; the outer web and part of the inner web next the shaft of the outer and second tail-feathers white; the third from the outside white, on a small portion of the outer web only; all the rest of these and the other tail-feathers black; all the under surface of the bird to the end of the under tail-coverts white; legs, toes

and claws black. This description, which is taken from Yarrell, applies exactly to Mr. Haddon's bird.

The female differs from the male in brightness of colour as well as in marking: she wants the white spot on the forehead; head, neck, back and wing-coverts dark hair-brown; greater coverts and tertials edged with dull white; tail-feathers like those of the male, but less bright in colour.

The egg is a sort of greenish blue, like those of the Redstart or Hedgesparrow, for which it may easily be mistaken, as it is about the same size.

Family MERULIDÆ.

Of the twelve species of Merulidæ or Thrushes reckoned as British I have been able to include eight as belonging to Somersetshire.

DIPPER OR WATER OUZEL, *Cinclus aquaticus*. The Water Ouzel, or "Water Colley," as it is locally called, is by no means an uncommon bird about our streams and rivers, where it may constantly be seen perched on a branch or stone, and occasionally dropping off into the water for food. Many questions have arisen about its powers of swimming and diving: that it dives well and uses its wings in paddling itself under water there seems to be now no doubt, and equally little doubt that it does not run on the ground under water, as has been asserted

by many. As to its power of swimming on the surface, which has been, and still is, I believe, disputed, I have settled that to my own, if not to other people's, satisfaction; for as I was walking by the brook here my attention was attracted by seeing, some way down the stream, a ripple in the water as if something was swimming towards me; as it was close under the bank on my side, and there was a slight bend in the stream, I could not see what it was, but, suspecting it to be a water rat, I lay by, stick in hand, to knock it down as it came round the bend, which it soon did, when, much to my surprise, it proved to be not a water rat but a Water Ouzel: it was swimming well and strongly against a moderate stream: on seeing me it rose from the water and flew off. From where I noticed the ripple it swam some distance, at least ten or twelve yards. As the water at the place was nearly two feet deep and the bank a perpendicular wall, the bird received no assistance from either bank or bottom, and had nothing but its own swimming powers to rely upon.

The nest of the Water Ouzel is generally placed under an arch or some overhanging stone or bank, generally, though not always, near a waterfall; but though occasionally placed very close to a considerable waterfall it is always so protected that the water cannot splash into it. It is a very early nester: in 1866 I saw a pair of Water Ouzels building as early

as the 20th of March; the year before I found a nest with eggs very hard set, upon the 6th of April.

The nest is a large domed structure, made of moss and lined with dry leaves, a small hole only being left for the entrance of the bird.

The poor Water Ouzel has been so much and so unjustly persecuted by gamekeepers and others interested in the preservation of fish, under the mistaken notion that it feeds upon the spawn of salmon and trout, that I cannot help noticing at some length the very successful defence that has been made to this charge. Mr. Saxby says on this subject, in the 'Zoologist' for 1863 (p. 8631), that when in North Wales he had an almost unlimited supply of specimens brought him by the keepers in the neighbourhood, and that in not one instance could even a trace of salmon ova be found in the stomach, although the spawning season was the time in which the slaughter of the Water Ouzel was most industriously carried on. In one instance only, he continues, could ova of any kind of fish be found, and that certainly was not of salmon or trout. In the 'Zoologist' for 1866 (Second Series, p. 21), Mr. Alston says, "A full investigation of the charges so often brought against the Water Ouzel, of feeding on the spawn of salmon and trout, will be found in Mr. Frank Buckland's book on fish-hatching, where he shows that, so far from eating, it in fact protects

them by destroying vast numbers of the water insects and larvæ which prey upon the ova." He gives the result of the dissection of more than forty examples examined by himself, Mr. Gould and others, many of which were killed on the spawning beds in various rivers. Of all these birds the stomach of one only contained a single fish's egg, and that was a diseased one. To these remarks may be added, I believe, the fact that the spawn of both salmon and trout are so covered by the sand and grit on the spawning beds that it is impossible for the Water Ouzel to get at it, although to crawling water insects, which form the principal food of the bird, it is found to be readily accessible.

The food of the Water Ouzel consists principally of beetles, the larvæ of flies, fresh-water shrimps and other aquatic insects, and occasionally small fish. I have quoted rather largely on the subject of the food of this bird, in the hope that the more publicity that is given to the various enquiries that have been made, and to their results, the greater probability there would be of the ill-judged persecution against this interesting bird being put a stop to, and thus prevent its becoming entirely extinct.

The beak of the Water Ouzel is brownish black; irides hazel; margin of the eyelids white; head and neck brown; rest of the upper parts lead-colour, each feather edged with darker, almost black; throat and breast white; next to the white a bay band

extends round the belly and sides; rest of the under parts dull lead-colour; legs, toes and claws brown.

The young birds have the whole of the upper parts dull greyish brown; wing-coverts and tertials tipped with white; feathers of throat and breast pale buff, tipped with brown; rest of under parts grey, with darker lines. In this state it has been mistaken for a separate species and called the "Penrith Ouzel."

The eggs are pear-shaped, and pure white, a little smaller than those of the Blackbird.

MISSEL THRUSH, *Turdus viscivorus*. The Missel Thrush, or "Holm Screech," as it is usually called in these parts, may be frequently heard, singing nearly, if not quite, as well as the Blackbird or Thrush, all through the early part of the year, especially before mild rainy or stormy weather, from which circumstance it has acquired another local name, the "Storm Cock." It is an early breeder, and its nest, being built before the leaves are much out, falls an easy prey to the youthful birdsnester, in spite of the care with which the bird attempts to conceal it by assimilating the outside to the colour of the forked branch in which it is usually built, the outside being formed of moss of the same colour as that growing on the tree, bound together with dry grass and covered inside with mud, and lined with fine grass. Often such a litter of moss is

made about the foot of the tree that anyone's attention must be called to it.

This is a bold, pugnacious, noisy bird, driving most other birds from the vicinity of its nest, and also from the thorn or other bush, on the berries of which it may be feeding.

The food of the Missel Thrush consists chiefly of berries of all sorts, especially those of the misletoe : it also eats worms, slugs, beetles, grasshoppers and other insects.

It is a rather handsome bird, although there is a good deal of sameness in the colouring. The beak is dark horn colour, the under mandibles inclining to yellow at the base ; the irides are hazel ; all the upper parts, including the tail, which is perhaps a shade darker, are greyish brown ; greater and lesser wing-coverts and all the quills dull brown, the feathers being all edged with yellowish white, which edging is broader immediately after the autumnal moult, before the feathers are worn ; all the under parts are yellowish white, regularly spotted with dusky, the spots being formed by the tip of each feather being dusky ; under wing-coverts white ; under tail-coverts yellowish white ; under surface of the wings and tail a sort of silver-grey ; legs and toes light brown ; claws dark brown. In the young bird, as is the case with so many species, the upper surface is more marked than in the adult.

The eggs are almost too well known to need description: they are generally rather larger than those of the Blackbird, but they vary in size as well in colour, the most usual colour being a dull greenish ground, which is much spotted with dull red and brown; in some the ground is of a reddish white.

FIELDFARE, *Turdus pilaris*. The Fieldfare is a numerous and well-known winter visitor, generally arriving towards the end of October or beginning of November (my earliest note of the appearance of this bird is the 1st of November), and departing about the middle or end of April, though occasionally it stays later: I have noted it myself as late as the 29th of April, and there are some notes in the 'Zoologist' of its appearance in considerable numbers as late as the 18th of May, and rarely a bird has been seen even in July: these occasional instances are most probably birds which, either from wounds or some other accidental cause, are not able to accompany the migration of their companions, as the Fieldfare is seldom known to breed in England. Yarrell says a nest has been found in Kent, and others in Yorkshire and Scotland.

The re-appearance of this bird has, in a few instances, also been noticed before the usual period—as early as August or September.

In very severe winters the Fieldfares leave us to go still further south; but occasionally, if the hard

weather comes on suddenly, many get too weak to recommence their journey southward, consequently dying of starvation.

The food of the Fieldfare appears to consist chiefly of worms, the larvæ of insects, and other soft-bodied animals; also (especially in frosty weather) of berries: it does not, however, appear at any time, even when under severe pressure, to feed on snails.*

“The nests (a hundred of which might be found in a very limited distance) are placed in the spruce fir, at heights from the ground varying from four to forty feet or upwards: they are made of the same materials and are much like those of the Ring Ouzel.”†

The Fieldfare is so well known that a very general description of it will be sufficient. The irides are hazel-brown; the beak dark horn at the tip, base yellow; the head and neck, as well as the rump and upper tail-coverts, bluish grey; there is a streak of light buff over the eye; back, scapulars and wing-coverts reddish brown, some of the feathers slightly tipped with bluish grey; throat and breast rich buff, streaked and spotted with black; belly white, spotted on the sides with black; under tail-

* ‘Zoologist’ for 1865, p. 9534.

† ‘Notes on the Ornithology of Norway,’ by Hewitson, —Magazine of Zoology and Botany, vol. ii., p. 309.

coverts the same; quills dusky, narrowly edged with dull white; secondaries and tertials—inner web dusky, outer web shot with reddish brown and bluish grey; legs and toes dark brown; claws black.

The eggs are said to be much like those of the Blackbird—so much so, indeed, as to be easily mistaken for them.

SONG THRUSH, *Turdus musicus*. This is another of our best-known and commonest birds, much beloved by those who delight in listening to its beautiful song; and, like most of its tribe, persecuted and hated by gardeners, with how much reason we shall see presently.

The Thrush is an early breeder, usually placing its nest in some low bush, or against the side of a hedge, and occasionally, but not often, on the ground. A very remarkable place is mentioned in the 'Zoologist,' namely, the top of a beehive; but that nest seems very soon to have been deserted, as may easily be imagined. It is a coarse structure of hay, grass and roots, lined with clay.

The food of the Thrush consists principally of insects, worms and snails. The number of snails devoured by these birds must be very great, to judge by the number of snail-shells to be found round any stone that the bird may have selected as convenient for breaking the shells. I am rather inclined to doubt the assertion that the bird con-

stantly returns to the same stone for this purpose ; but, on the contrary, I imagine it goes to the nearest stone well suited to its purpose, for I have occasionally found so many of these stones within such a very short distance of each other that they must have exceeded the number of Thrushes in the locality. On one occasion, for instance, in the island of Herm, near Guernsey, where the number of Thrushes is limited, I found within a very short distance such an immense number of stones that had been used for this purpose, that I am sure each bird, as he caught a snail, must have rushed to the nearest stone to break it. In this dry summer (1868) the number of snails destroyed by this bird and the Blackbird has been perfectly incalculable.

Various sorts of berries and (in the summer) fruit form part of the food of the Thrush, from which latter circumstance arises the enmity of the gardener, who seldom gives credit for the number of snails which fall victims to the Thrush, and the amount of damage the snails would have done to his garden without this useful ally. Whenever I have mentioned this to any gardener, the answer always is, "It would be much better to kill the Thrushes and pay" (which means let his master pay) "boys to pick off the snails." Which would be most profitable to the master, I leave the reader to judge.

The beak of the Song Thrush is dark horn-colour on the upper mandible and on the tip of the lower; the base of the lower mandible yellowish brown; irides hazel; the whole of the upper parts are uniform dull olive-brown; each feather of the greater and lesser wing-coverts is tipped with buff, which forms two lines of that colour on the closed wings; the primary quills and the tail are rather darker than the rest of the upper parts; the ear-coverts are yellowish buff and brown, surrounded by dark brown; all the under parts yellowish buff, lighter, nearly white, in the centre, speckled with very dark brown; legs and toes pale brown; claws darker brown.

The back and scapular feathers in young birds have each a pale yellow spot in the centre; the smaller wing-coverts are streaked with pale brown.

Varieties of the Song Thrush occasionally occur. I once saw, at Mrs. Turle's, a whole brood quite white, which had been brought in to be stuffed.

The eggs are about the same size as those of the Blackbird, but rather rounder; bright blue, thinly spotted with black.

REDWING, *Turdus iliacus*. The Redwing, or as it often locally called, the "Wind Thrush," is a winter visitor to this country, generally arriving rather before the Fieldfare: my own earliest note of their arrival is the 12th of October. They depart for the North about the beginning or middle of April.

Yarrell says, in his history of the Redwing, that it does not bear cold so well as the Fieldfare; but this by no means agrees with my own observation, for I have often found Fieldfares in hard weather quite weak and exhausted by starvation, hardly able to get out of the way, the Redwings at the same time appearing much as usual. A note in the 'Zoo-logist,' by Mr. Cordeaux, dated March 2nd, 1865, quite bears out my own observation: it is as follows:—"During the late severe frost and snow I have found Fieldfares starved to death, generally in the vicinity of running water, but so far not a single Redwing. During the frost the Redwings subsisted, I believe, nearly entirely on snails, both the large common snail and the pretty variegated sort: judging from the broken shells, the number of the latter snails destroyed by Redwings must be enormous. In a walk near the Humber the other day I saw several small flocks of Redwings, and every prominent stone was strewn around with broken fragments of snail-shells. I have lately on several occasions seen these birds hammering away against a stone. I do not think the Fieldfares resort to the same diet, and have often watched to ascertain if they did so, but without avail; had they been in the habit of feeding upon snails they would probably not have fallen victims to the frost."

There is another observation of Yarrell's that I do not quite agree with either: he says the Red-

wings appear much less inclined to feed on berries than most of the other species of this genus. I have generally found them, on their first arrival, in some hawthorn bushes, and have often watched them feeding greedily on the berries : there were generally also a few Song Thrushes and a stray Blackbird or two : an occasional Missel Thrush would come and bustle about, making everything else uncomfortable for a short time ; but the number of Redwings by far exceeded that of all the others put together.

The food of the Redwing also consists of slugs, beetles and their larvæ.

In its summer residence the Redwing is said, by those who have heard it, to be a beautiful songster, so much so as not only to have obtained the name of the "Nightingale of Norway," but also to well deserve the name ;* but the question whether it ever sings in England has given rise to considerable discussion among Ornithologists, some asserting that they have not only heard it sing, but killed it in the act of singing ; so that there could be no possible mistake as to the identity of the bird. The evidence on the other side is, of course, merely negative—namely, the witness has not heard it sing. I cannot myself help the subject further than by the same

* "The Redwing is called the Nightingale of Norway, and well it deserves the name."—Notes on the Ornithology of Norway, by Hewitson.

negative sort of evidence. I have often heard Redwings in the spring, just before their departure, twittering, or rather chattering, together, very much like a flock of Starlings, for which, if not seen, they might easily have been mistaken; but I have never heard anything like real singing. This negative evidence, however, is not worth much against the positive assertion of competent judges that they have actually heard them sing beautifully, and that in this country.

The nest is similar to that of the Fieldfare, but placed nearer the ground.*

The beak of the Redwing is dark horn-colour, except at the base of the lower mandible, which is pale yellowish brown; the irides hazel; the whole of the upper parts as in the Song Thrush; there is, however, a conspicuous streak of nearly pure white running from the base of the upper mandible over the eye, which will immediately distinguish it from that bird; ear-coverts the same colour as the back; throat white, with some streaks of dark brown mostly on the side; all the under parts white, spotted with brown, except a portion of the flanks and the under wing-coverts, which are red, whence the name of the bird; legs pale brown; toes and claws dark brown.

The Redwing does not nest in England, but

* Mag. of Zool. and Bot., vol. ii., p. 312.

its egg is said to be much like that of the Blackbird.

BLACKBIRD, *Turdus merula*. The Blackbird (in these parts invariably called the "Colley"), like the Thrush, is much admired for its song, and equally, if not more, persecuted by the gardener for its fruit-eating propensities. Like the Thrush, too, it is an early nester, and generally chooses much the same sort of place for its nest, which is made of much the same materials and lined with fine bents.

This is another of the birds which appear in M. Prevost's list, a perusal of which would convince, I think, even a gardener, that the Blackbird does him at least as much good as harm. It is as follows:—"January, seeds, spiders and chrysalids; February, the same; March, worms, buds of trees and grubs; April, insects, worms and grubs; May, cockchaffers and worms; June, worms, grubs and fruit; July, all sorts of insects, worms and fruit; August, the same; September, the same; October, worms, chrysalids and grubs of butterflies; November, seeds, corn and chrysalids; December, the same." In this list, though the words "fruit" and "buds" appear, it is only for a short time in the year that the Blackbird can regale himself upon these luxuries, and throughout every month mischievous grubs and insects form the staple portion of his food. If the amount of damage which would be done by these were calculated, the Blackbird

might well be allowed a small amount of fruit without grudging, the greater part being easily guarded from his depredation. Moreover, the whole of the fruit eaten by the Blackbird is not such as comes under the protection of the gardener; for ivy, laurel and blackberries, and many other wild berries are considered by him equally good eating with the best productions of the garden. In the stomachs of several that I have examined the fruit and the insect portion of the food have been pretty equally divided. In the stomach of one shot in the garden, however, I found as many as six small black beetles and only two gooseberries; and in that of another two wasps, nearly whole, and two or three common house-flies. During this dry summer of 1868 both Blackbirds and Thrushes have been most busily employed in devouring snails.

The Blackbird is much too well known to need any other description than that given of him by Bottom—

“The ouzel cock so black of hue,
With orange-tawny bill.”

The hen differs considerably, and as our friend Bottom does not mention her, I may give the following description:—The bill is dark horn-colour; all the upper parts dark olive-brown; the throat reddish brown, streaked with dusky; all the rest of

the under parts are a lighter olive-brown than the back.

The young have the upper parts brown, each feather having a central streak of pale rufous-brown; under parts light rufous-brown, each feather tipped with dusky brown, more distinctly so in the males.

Varieties of the Blackbird are of common occurrence, the most general being more or less pied with white. I have one in my own collection whitish under the throat, which is the most usual variety, but in this case the white is slightly tipped with pink.

The eggs are of a light greenish colour as to the ground, much speckled with brown and reddish brown, but they vary considerably.

RING OUZEL, *Turdus torquatus*. The Ring Ouzel, or "Mountain Colley," as it is usually called in the parts about here, is a very scarce bird in this immediate neighbourhood, but is more numerous in the wild country towards Dulverton, where it breeds regularly. It is a migratory species, arriving in England in April and leaving in October, about which latter time it is most numerous, appearing in some places in small flocks previous to its autumnal migration, which has given rise to another local name, that of "Michaelmas Blackbird." A stray bird is occasionally seen on the Quantocks, but on those hills it is decidedly of rare occurrence.

The food of the Ring Ouzel consists of insects, snails, fruit and berries, particularly the berries of the mountain ash, of which it appears to be very fond: ivy-berries, it is said, afford this bird its principal food on its return in the spring.

The nest is said to be usually placed on or near the ground, or on the side of a bank, under cover of some bush or stone, or amongst heather: the one in my collection, which was taken at Pixton, is much like that of the Blackbird, being made of rough coarse grass, fibrous roots and mud, and lined with long bents.

The Ring Ouzel has the point of the beak dark horn-colour; the centre of the upper mandible, and all the rest of the lower, yellow; the base of the upper mandible dark horn; irides dark brown; head, neck, throat, back, scapulars and tail-coverts black; there is a white crescent on the breast, all the rest of the under parts are black, each feather being edged with grey; tail dusky; greater and lesser wing-coverts, primary and secondary quills dusky, more or less edged with grey; the tertials are dusky, without any grey edging; legs, toes and claws brownish black.

The female differs slightly; all the upper surface is a rusty black; the feathers under the throat are slightly edged and tipped with white; the white crescent on the breast is quite as conspicuous as in the male, but not quite so broad in the centre; the

under parts are rusty black, each feather having a broader grey edging than in the male; wings and tail same as in the male.

This is the description of a pair in my collection, which were shot at Pixton, near Dulverton, in this county, in June, 1866. Another mature specimen I have was probably killed in the autumn, soon after the moult, as the black feathers on the upper parts are slightly edged with grey. In the young bird the crescent on the breast is scarcely to be seen; its position, however, is just to be discerned on a close inspection.

The eggs appear to be something like those of a Blackbird, but not quite so thickly speckled. Yarrell says the eggs are of a light blue, speckled and spotted with reddish brown.

GOLDEN ORIOLE, *Oriolus galbula*. Having seen one specimen, a female, of this rare and very beautiful summer visitant, at Mrs. Turle's, the birdstuffer at Taunton, which had been killed near Minehead, I have to include it in the list of Somersetshire birds.*

The Golden Oriole is an occasional summer visitant, and has been met with in most of the

* Since writing the above I have seen another Somersetshire specimen, also a female, said to have been shot at Bradford, near Taunton, and now in Mr. Sandford's collection at Ninehead Court.

counties of England: several specimens have been killed in Devonshire and Cornwall. It has also been known to breed in England, though rarely: it would probably do so more regularly if unmolested; but its beautifully bright plumage renders it very conspicuous, and hence eagerly sought after by collectors of birds; its feathers are also much in request by ladies for hats.

The nest is said to be placed in the forked bough of a tree: it is formed of sheep's wool and long slender stems of grass.

According to M. Prevost's list, this bird must be very mischievous in the garden; but, on account of its extreme scarcity, it is not at all likely to disturb the equanimity of our gardeners, so I shall not take up space by quoting the somewhat long list of its misdemeanours. At the same time I may observe that, as in the case of many other birds, the list of its services is very nearly as long.

The male Golden Oriole is not likely to be passed by without being immediately recognised by the most unobservant: the female, however, not being quite so brilliant, might possibly escape recognition. The following description is taken from Meyer's 'British Birds':—"The entire body of the male is brilliant yellow, including the head, neck and tippet, the breast and all the under parts; the wings and tail are black, with the exception of the tips of the spurious wing-feathers, which are yellow, and the terminal portion

of most of the side feathers of the tail, which are also yellow; the quill-feathers are narrowly bordered with white; the two middle feathers of the tail are black; a black line passes from the base of the beak to the eye; the iris is carmine-red; the beak bright reddish brown; the legs and feet are ash-colour. The female is olive-green on all the upper parts of the body; the under parts greyish white; the shafts of the feathers dusky; flanks yellowish, streaked with brown; the tail-feathers are dark olive, those on the sides tipped with yellow; the wings and wing-coverts brown; the beak browner than in the male. The young birds resemble the female, with the addition of dark shafts to the feathers of the upper plumage; the iris and beak are dusky."

The eggs are about one inch two lines long, and ten lines in breadth; of a white colour, slightly tinged with purple, with a few distinct spots of ash-grey and claret-colour.

Family SYLVIADÆ.

To the Sylviadæ belong almost the whole of our migratory summer warblers: arriving in great numbers, mostly in the months of April and May, they enliven with their song our gardens and hedge-rows till late in the summer, when their broods are hatched, after which their song usually ceases. In the autumn, mostly in the months of September and October, they again take their departure. This large

family includes now as many as thirty British species, and of these I have been able to include twenty-one species amongst the Somersetshire birds. The food of the greater part of the Sylviadæ consists principally of insects, grubs and flies: they may, therefore, claim our protection as much for the service they render to our gardens (though a few may now and then excite the wrath of the gardener by a sly bite at his fruit) as for the pleasure they afford us by their song.

ALPINE ACCENTOR, *Accentor alpinus*. The Alpine Accentor, the first bird on my list of Sylviadæ, is a rare and accidental visitant in England, though, thanks to the notices which appear from time to time in the 'Zoologist,' its visits do not appear to be quite so rare as was at one time supposed. I include it in the list of Somersetshire birds on account of one specimen having been shot in the garden of the Deanery at Wells, in the year 1833: this, I believe, is the only Somerset specimen yet recorded.

The Alpine Accentor frequents, as its name implies, mountainous and rocky districts, differing in this point from our common Hedgesparrow, which it otherwise somewhat resembles, although rather exceeding it in size. Its food is said to consist principally of insects and seeds.

The nest is said to be placed among stones or in cavities of rocks, and sometimes on the roofs of

houses: it is formed of moss and wool, and lined with hair.*

The following description is taken from Yarrell:—
“The beak is black at the point and yellowish white at the base; the irides hazel; head, neck and ear-coverts brownish grey; feathers of the back brown, with longitudinal central patches of darker blackish brown; rump greyish brown; wing primaries blackish brown; the centre of each tertial still darker, edged on both sides with reddish brown, varied with black, and tipped with a spot of white; upper surface of the tail-feathers dark brown, tipped with buff; chin, throat and front part of the neck dull white, with a small black spot in each feather; chest dark grey; the breast and flanks varied with chestnut-coloured patches; under tail-coverts dark greyish brown, edged with dull white; under surface of the tail-feathers ash-grey, tipped with dull buffish white; legs and toes orange-brown; claws black.” The plumage of the female is not so bright as that of the male.

The eggs are much like those of our common Hedgesparrow, but larger and rather more intense in their colouring.†

HEDGE ACCENTOR, *Accentor modularis*. The Hedge Accentor, or as it is more commonly called

* Yarrell, vol. i., p. 251.

† Hewitson.

the "Hedgesparrow," is a very unassuming little bird—neat, but certainly not gaudy, in plumage. It may be seen in every shrubbery and hedge-row in the country, and its song heard throughout the greater part of the year. In these parts it is very generally known by the name of "Dunnock," to which the term "Blind" is often prefixed.

Why the Hedgesparrow is so commonly called the "Blind Dunnock" I do not know, unless it be on account of its stupid blindness in not distinguishing the Cuckoo's egg when laid in its nest, which is so essentially different in colour from its own bright blue eggs, and also for its want of discernment in nursing up the great overgrown young of that bird, while it leaves its own to starve or to be pushed out of the nest. Many other birds, however, are equally stupid in this respect, but the Hedgesparrow seems to have gained a special notoriety even before the time of Shakspeare, for he quotes the lines:—

"The Hedgesparrow nursed the Cuckoo so long,
It had its head bit off by its young."

The food of the Hedgesparrow consists principally of insects, such as small beetles, caterpillars and flies, and the larvæ of many insects; in the autumn and winter of seeds also, which it picks up from the ground: the young birds are said to be invariably fed with insects: how this may be I am not sure, but as I have a pair of Hedgesparrows now

building a nest in my aviary I hope to be able to ascertain this for certain during the summer.* The old birds appear to pick up a very good living on sopped bread and small seeds, such as canary and rape seed: the seeds also of docks and sorrel they appear to be fond of, as are many other of our small birds, thereby rendering a considerable service to the farmer and gardener.

The nest is usually placed in some low bush or on the side of a hedge: it is made of dry sticks, hay, grass-roots, moss and wool, and lined with hair. I once knew a pair of these birds repair an old Thrush's nest of the year before, and rear their brood in it.

The beak of the Hedgesparrow is dark horn-colour; the irides hazel; head, nape of the neck and all the rest of the upper parts are burnt umber-brown, the centre of each feather very dark brown, almost black; sides of the neck, throat and breast dull slate-blue; ear-coverts brown; belly and under tail-coverts almost white; flanks and thighs brown; primary and secondary quills dusky, very slightly edged with brown; tail dusky brown; feathers edged with lighter brown, under surface greyish brown; legs and toes orange-brown; claws black.

The young before the first moult differ slightly, the throat being greyish white, varied with small

* The eggs have unfortunately since been destroyed.

dark-coloured spots, and the general colour of the other part of the plumage is darker.

Varieties of the Hedgesparrow are not at all uncommon. I have two in my collection: in one the whole of the upper parts are a sort of buff, and all the rest, including the parts which are ordinarily slate-blue, is dirty white; the other is pied with the usual colour and white, nearly every other feather being white.

The eggs are well known: they are of a beautiful greenish blue colour; their length about nine and a half lines, and breadth about six and a half.

ROBIN, *Erythaca rubecula*. "This amiable little songster is eaten roasted with bread-crumbs," is the sentence with which a French author begins or ends his account of the Robin; and as to the cooking he may be perfectly right, but I cannot agree with him in the epithet "amiable," for a more ill-natured, pugnacious little fellow, particularly amongst those of his own species, I do not know. I have one in my aviary, and can only keep one; for though the aviary is of a tolerable size, and the other birds live there contentedly enough, the Robin will not allow a second one to be put in: the moment this is done a fight ensues; but this does not end the matter, for the winner sets up a system of bullying, which invariably ends in the death of the other: the single one, however, lives contentedly enough with the

other birds, except that he makes an occasional unprovoked assault on the Hedgesparrow.

There seems to be a strange popular notion in some counties, that the young Robins kill the old ones: this strange notion gave rise to a considerable discussion in the pages of the 'Zoologist,' which ended without any convincing evidence being adduced in its favour.* For my own part I believe the theory to be quite as absurd as that which has arisen from the child's story-book, of the marriage of Cock Robin and Jenny Wren.

The Robin is another of the birds mentioned in M. Prevost's list, according to which it would appear to be almost entirely insectivorous. "January, insects, worms and chrysalids; February, insects, worms and wood-lice; March, chrysalids and worms; April, moths, eggs of insects, and cockchaffers; May, grubs and beetles; June, flies, moths, spiders and worms; July, moths, butterflies and wood-lice; August, the same, and worms; September, the same; October, eggs of insects and aquatic insects; November, worms and chrysalids; December, chrysalids, grubs, and eggs of moths." To the summer and autumn diet may be added a little fruit, such as currants and raspberries; and to the winter, bread-

* As Yarrell gives an instance of one pair of Robins rearing three broods in the year, it is quite clear neither of the earlier broods perpetrated such a murder.

crumbs, meat, and nearly anything that can be got by begging. The single one in my aviary lives much the same as the Hedgesparrows, and seems very fond of ants and their eggs.

The nest is usually placed by the side of a bank, or in thick ivy on a wall, or in some low bush, but various, and occasionally rather odd, situations are chosen: it is made of moss, dry grass, dead leaves, &c., and is lined with hair and a few feathers.

The Robin has the bill black; the irides black; head, neck, back, scapulars, wing and tail-coverts olive-brown; greater wing-coverts slightly tipped with buff; a streak over the base of the beak, and over the eyes, as well as the throat and breast, orange; a narrow band of bluish grey surrounds all the lower part of the orange; thighs, flanks and under tail-coverts lighter olive-brown than the back; belly nearly white; quills and tail olive-brown, each feather edged with a lighter shade; legs, toes and claws brown. The young birds before the first moult have the feathers of the upper parts tipped with very pale brown; those of the throat and breast tinged with reddish brown and margined with dark brown. Varieties of the Robin occasionally occur.

The eggs are about the size of those of the Hedgesparrow; of a white ground, slightly tinged with green, spotted with light rust-colour, the spots being most numerous at the larger end, where they

run together into a smear. Varieties of the egg are common: I have one nearly white.

BLUETHROATED WARBLER, *Phœnicura suecica*. Since publishing some of these notes in the numbers of 'Eyes and No Eyes,' I find I have to include this rare British bird in the Somersetshire list, on account of one specimen in the Albert Memorial Museum at Exeter, which was labelled as having been killed in Somersetshire. I wrote to the Curator of the Museum for further information about this specimen, but his answer did not throw much light on the matter, all the information he could give me being that it was killed in Somersetshire in 1856, and formed part of the collection of the late F. W. L. Ross, Esq., of Topsham, Devon.

This is a migratory species, going northward in summer, at which time it is common in many countries of Europe much further northward than England, even as far as Finland; but its usual course of migration being to the eastward of England, only a few occasional stragglers appear: specimens have, however, been noticed in many counties, amongst others in the neighbouring counties of Devon and Dorset. In the Isle of Wight this bird appears occasionally to remain throughout the year, and may even breed there.*

* See notes by Captain Hadfield in the 'Zoologist' for 1865 and 1866.

The food of the Bluethroated Warbler appears to consist principally of earth-worms, insects and berries. It appears to be fond of swampy ground, woody borders of boggy heaths, and the banks of streams:* in such situations the nest is usually placed on the ground, amongst plants of bog myrtle, in places overgrown with coarse grass, on the sides of sloping banks, and in the bottom of stubs and scrubby brushwood in wet situations: it is composed of dead grass and moss, and lined with finer grass.

Captain Hadfield considers this bird to be smaller than the Robin, which bird he says it much resembles in many ways. Yarrell, however, seems to think it larger, the respective lengths, according to him, being that of the present species six inches, that of the Robin five inches and three-quarters.

The following descriptions are taken partly from Yarrell and partly from Captain Hadfield's notes, before mentioned:—"The beak and irides are dark brown; over the eye is a pale streak; the top of the head, all the upper surface of the body and wings, uniform clove-brown; outer edges of the wing-feathers lighter brown; the two middle tail-feathers clove-brown throughout their whole length; all the other tail-feathers have the basal half pale chestnut,

* See Yarrell, vol. i., p. 266; also Captain Hadfield's notes.

the distal half nearly black; chin, throat and fore part of the neck and upper part of the breast ultramarine blue, with a spot in the centre, which in some specimens is pure white, but in very old males is red;* below the blue colour is a black bar, then a line of white, and still lower down a broad band of bright chestnut; the belly dirty white; flanks and under tail-coverts light reddish brown; legs, toes and claws brown. The females resemble the males in the uniform colour of the upper parts; the tail-feathers are not so bright; the chin and upper parts of the throat white, bounded below by a crescent-shaped patch of blue, mixed with some black; the horns of which are directed upwards, encircling the white below the blue colour; the breast is pale reddish brown."

The bird in the Exeter Museum, as well as I could see (for it was high up and in a small case), appeared to be a young bird of the year, and very nearly answered the description given by Captain Hadfield of one of the Isle of Wight birds: "Chin and upper part of the throat of a greyish, tinged with yellow; this gorget-like patch extends to the cheeks and over the bill, which is black; the breast of a dull bluish colour, longitudinally streaked with reddish brown, and slightly spotted and shaded

* There appears at present to be some doubt whether the birds so marked are not a distinct species.

with dull white; the under parts of the latter colour."

The eggs are of a uniform greenish blue.

REDSTART, *Phœnicura ruticilla*. The Redstart is one of the brightest and prettiest of our summer visitants. It arrives in this country about the middle of April: my own notes of its arrival vary from the 16th to the 19th of April, and I have noticed its stay as late as the 23rd of October. Mr. Blake-Knox mentions two instances of the female having occurred in Ireland during the winter.* It is not at all an uncommon bird in this neighbourhood, where it is usually called the "Firetail," and being conspicuous from its bright colours and lively manners, is better known than many more common birds.

The Redstart generally frequents orchards and gardens, where it appears to be of the greatest use by the destruction of mischievous insects. Some idea of the number of such things destroyed by birds may be gathered from the following note in the 'Zoologist' for 1863:—"A pair of Redstarts who have a nest in my garden have done me the greatest service by devouring those pests of the garden, the gooseberry grub. From frequent observations I am convinced that a pair of Redstarts (during the time their young require their attention) will destroy at least six hundred grubs and caterpillars in a day."

* 'Zoologist' for 1866 (Second Series, p. 222).

The Editor says, in a note upon this, that he himself never had ocular demonstration of any bird but the Cuckoo actually eating the gooseberry grub. The Redstart also feeds on worms, beetles and their grubs, flies (which they frequently catch on the wing, flying from the ground or a twig, like Fly-catchers or Wagtails), spiders, ants and their eggs, fruit and berries.

The nest is generally to be found in a hole in a wall or tree: it is made of moss, and lined with hair and feathers. Like the Robin this bird occasionally chooses queer places for its nest. Stanley, in his book on Birds, gives a picture of a Redstart's nest behind the hinge of a door.

The adult male Redstart has the beak black; the irides brown; the throat, sides of the neck and cheeks, including the eye and also a very narrow streak over the beak, black; forehead white, a streak of which extends back over the eye; head, neck, back, scapulars, lesser wing-coverts bluish grey; tail-coverts orange-red; greater wing-coverts and all the quills dusky brown, very narrowly edged with a lighter shade; tail orange-red, slightly darker than the tail-coverts, the two centre feathers dusky brown, except the base and the edging of the outer web, which are like the rest, the shafts of the feathers are orange-red; breast and belly the same, inclining to dirty white towards the under tail-coverts and on the flanks; legs, toes and claws dark

brown. The female is not nearly so conspicuous, the whole of the upper parts being hair-brown, with a rather darker shade on the quills and wing-coverts; tail and tail-coverts like the male, but not quite so bright; throat and all the under parts dirty white, with a brown tinge on the breast.

In the young birds the feathers of the upper parts are yellowish brown, narrowly edged with dusky, the colours getting brighter towards the tail-coverts, which, with the tail, are like the adult; primary quills dusky; secondaries, tertials and greater wing-coverts dusky, edged with rusty; the under parts are lighter than the upper, but the feathers are equally edged and tipped with dusky; beak, legs, toes and claws lighter than in the adult male.

The eggs are very much like those of the Hedge-sparrow, both as to size and colour.

BLACK REDSTART, *Phœnicura Tithys*. The Black or "Tithys Redstart," as it is often called, is a rare bird in this county, but specimens do occasionally occur in various parts. Yarrell mentions two as having been killed near Bristol, one in the year 1830, and another in the December of 1835. Another was shot a few years ago in Galminton Lane, near Taunton, and was very kindly presented to me by Mr. Marshall, of Belmont, together with a female bird which had been shot in one of the more northern counties;

and Mr. Gurney says,* “On the 31st of October I saw a male *Tithys* Redstart in a small garden near the beach at Minehead, where it remained sitting on a low apple tree till driven away by another bird.” In the neighbouring county of Devon it is not quite so rare a bird, especially on some of the rocks on the south coast near Teignmouth, where I have occasionally seen it in the months of October and November. Most of the occurrences appear to have been during the winter half-year, from October to March, which is a curious circumstance, as Yarrell speaks of it as a common summer visitor to Germany, France and Switzerland. It has much of the lively manners of the Common Redstart, last mentioned; but seems to prefer rocky situations to the shrubberies, gardens and hedge-rows generally frequented by that bird.

The food of the Black Redstart consists of insects, which it picks up from the sea-weed, when its habitation is near the coast: it also eats other insects in their various stages, worms, small fruit and berries.†

The nest is said to be placed in clefts in rocks, holes in walls, and in the roofs of houses: it is formed of grass, and lined with hair.‡

* The ‘Zoologist’ for 1867 (Second Series, p. 1018).

† Yarrell, vol. i., p. 275.

‡ Id., p. 276.

In the adult male the beak is black; irides blackish brown; the head, neck, back and scapulars dark lead-blue; rump and tail-coverts orange-red; wing-coverts black, rather broadly margined with the same colour as the back; quills dusky, tertials rather broadly margined on the outer web with white, making a spot of that colour on the closed wing; the two central tail-feathers reddish brown, the rest orange-red, like the coverts; a small space immediately over the beak; the cheeks to the eyes, chin, throat and breast, black—the feathers on the throat and breast margined with grey; flanks, belly and vent darkish grey, shaded nearly to white at the vent; under tail-coverts white, tinged with orange-red; legs, toes and claws black.

The female has the whole of the head, neck all round, back, scapulars, breast and flanks dull smoky brown; wing-coverts and tertials dusky brown, margined with pale grey; primary and secondary quills dusky brown; rump, tail-coverts and tail much the same as in the male, but not so bright; the tips of all the tail-feathers are reddish brown, like the two centre feathers; the under tail-coverts pale orange-red. The young birds of the year resemble the adult female.

The eggs are white: Hewitson says that when they are blown they are of a purer white than those of any bird he has seen.

STONECHAT, *Saxicola rubicola*. This bright, sprightly little bird, I am glad to say, is not at all uncommon with us: it is resident here throughout the year, though it changes its locality for a short time in the winter, when it generally leaves the hedge-rows of the vale, on the topmost twigs of which it has passed the summer, for some of the more sheltered bottoms of the Quantock and other neighbouring hills, where it may be seen all through the winter, perched on the top of some furze-bush, looking as bright and gay as it does on the hedge-rows of the vale during the summer. In mild winters it does not always make even this partial migration, for I have observed it at a favourite spot on the road from here to Taunton in January.

The Stonechat, though partially resident with us, receives considerable additions to its numbers during the summer: the foreign-going birds return to this country early in March, and continue with us until tolerably late in the autumn.

This is an early-nesting bird, usually beginning to build early in April: its nest is difficult to find, being generally on or close to the ground, at the bottom of some thick furze or bramble-bush; or if it builds in a hedge its nest is generally in the thickest place on the top, or what in these parts is called the "combe" of the hedge: it is made of moss and strong grass, lined with bents, hairs and a few feathers.

The food of the Stonechat consists of flies, grubs, caterpillars and other insects, of which it devours large quantities. In hard weather it occasionally waits on any one who is digging, watching for anything that may turn up; and one of the writers in the 'Zoologist' says that on one occasion he saw a Stonechat so intent on its search for food that it was caught by a hat being placed over it by the man who was digging.

The Stonechat is always conspicuous, both in consequence of the situation which it chooses, and of the strong contrast of colour which it presents. The male bird has the beak black; irides dark brown; head, neck and throat black; on each side of the neck, just below the black, is a spot of white; back, scapulars and rump black, each feather edged with rufous; wing-coverts the same, except those of the tertials, which are white, making a conspicuous spot of that colour both on the closed and open wing; upper tail-coverts white; all the quills dark dusky, almost black, edged with rufous; tail nearly black; breast and flanks bright rufous; belly and under tail-coverts nearly white; legs, toes and claws black.

The Stonechat is one of those birds which, as I have before remarked, make a material change in their plumage after the autumnal moult, at which time it somewhat resembles the female: the feathers of the head and neck are at that time so broadly

margined with rufous as scarcely to show any of the black which is so conspicuous in the spring, and which becomes more visible as the margins wear off, until about April or May the margins are almost or quite gone, and the head and neck become (as before described) black; the margins also on the feathers of the back wing-coverts and quills are almost sufficiently broad to conceal the dark colour of the rest of the feathers; the tail-feathers are also at this time margined with a lighter rufous than that of the back.

The plumage of the female differs considerably from that of the male: the feathers of the head, neck, back and scapulars are dusky, margined at all times with rusty brown; the rump and tail-coverts are more rufous; the wing-coverts, except those of the tertials (which are white, as in the male), are dark dusky, almost black, margined with rusty brown; tertials the same; secondary and primary quills and tail brown, very slightly margined with light rusty; cheeks and ear-coverts brown; throat dirty white, slightly spotted with black; breast and all the rest of the under parts light rufous. The young birds, after their first moult, resemble the female.

The egg is of a greenish blue ground, very thickly spotted with dull rust-coloured spots, mostly at the thick end: in size it is rather smaller than that of the Hedgesparrow.

WHINCHAT, *Saxicola rubetra*. The Whinchat is much less numerous in these parts than the Stonechat, which it much resembles in habits: it is, however, a much more decided summer visitant, seldom arriving before the middle of April; and very few instances of its appearance in England during the winter months have been recorded. Montagu says it is common in this county; and in the eastern parts it may be so, but not in our own immediate neighbourhood, where its visits are generally few and far between, and their duration short, its first appearance being immediately after its arrival in the spring, and it departs again before the breeding season—at least, I have never seen one further on in the summer. I have never observed it on the Quantock Hills, where the Stonechat is numerous.

Both in the place it selects for its nest and in the materials made use of, it much resembles the Stonechat. Meyer says its food consists almost entirely of insects, such as flies, bees, beetles and caterpillars, some of which are taken by darting upon them from a bush, and others are sought for on the ground.

The beak of the Whinchat is black; irides brown; the feathers of the head and neck black, edged with rusty; a white streak extends from the base of the upper mandible over the eye; cheeks and ear-coverts black; a streak of white extends from the base of

the lower mandible under the black, which it nearly surrounds; the back and scapulars are black, each feather broadly margined with pale yellowish rusty; tail-coverts rusty, with a black spot near the tip of each feather, tips themselves nearly white; wing-coverts black, with a slight margin of rusty; the feathers of both the greater and lesser wing-coverts nearest the body white, making a conspicuous patch of white in that part of the wing; bastard wing white; quills and tail dark dusky, almost black, with a slight margin (broadest on the tertials) of yellowish rusty; throat, breast and flanks bright yellowish rufous; belly and under tail-coverts nearly white; legs, toes and claws black.

In the female the colours are not quite so bright; the white on the bastard wing is not so conspicuous, being mixed with yellowish rusty; and the throat, breast and flanks are not so rufous, and have more of the yellow in them.

The eggs are bright greenish blue, more or less speckled with rusty: they are slightly larger than those of the last species.

WHEATEAR, *Saxicola Œnanthe*. Except perhaps the Chiffchaff, the Wheatear is the earliest of our summer visitants, arriving in this country in March, occasionally quite early in the month: it is a tolerably numerous species throughout the length of our coast, and on the Mendip Hills: on the Quantocks it is confined to the western slope towards the sea,

near St. Audries and Quantock's Head. In my own immediate neighbourhood, and throughout the Vale, it is only an accidental visitor, an occasional straggler making its appearance for a short time about the migrating seasons.

It is a very gay lively bird, having something of the manners of the two last-described species, except that, instead of bushes and hedge-rows, it delights in grassy sheep-walks or sandy rabbit-warrens, interspersed with large stones and rocks; but like them it delights in placing itself in conspicuous situations—on a big stone or rock, or even a mole-hill.

The food of the Wheatear consists almost entirely of different sorts of insects and their larvæ, such as flies, grasshoppers and beetles.

The nest is placed in openings and crevices in rocks, or in loosely built stone walls, and occasionally in a rabbit-hole: it is made of moss and grass, intermixed with wool, and lined with wool or hair.

The Wheatear may, perhaps more than any other bird, be taken as an example of the material change which takes place in the plumage immediately after the autumnal moult, the broad edgings of the feathers at that time entirely altering the appearance of the bird.

The adult Wheatear has the beak black; irides dark brown; and on its arrival here, and during the

summer, the plumage is as follows:—Forehead and a streak over the eyes white; head, neck, back and scapulars greyish blue; rump and tail-coverts white; from the base of the upper mandible is a black streak which surrounds the eye, broadest beneath, and includes the ear-coverts; wing-coverts and all the quills black; tail-feathers white to within about half an inch of the tips, which are black; the two central feathers are black nearly to the base, which is white; throat, breast, and all the under parts buff, lightest on the belly.

The female is nearly the same as the male, but the colouring not quite so distinct; legs, toes and claws black. After the autumnal moult the whole of the upper parts are of a yellowish brown; the wing-coverts and tertials are margined with rusty: as far as outward appearance goes there is not a vestige of the greyish blue of the spring. I have in my collection one killed here on its first arrival in the spring, in which specimen a few of the greyish blue feathers of the back and scapulars have some slight remains of autumnal yellowish brown margins.

The egg of the Wheatear is a light blue—in some specimens quite plain, and in some slightly speckled with rusty: it is rather larger than the egg of either of the two last species.

GRASSHOPPER WARBLER, *Salicaria locustella*. The Grasshopper Warbler is probably rather more common than is usually supposed, its sombre colours

and wary habits, as well as the localities it inhabits, all causing it to be overlooked by even moderately attentive observers: it is, however, more readily to be recognized by the ear than the eye, as it makes a noise very like the grasshopper, whence its name. I am told it is not at all uncommon on the banks of the Tone, especially between Taunton and Bishop's Hull.

It is generally aquatic in its habits, frequenting wet and marshy situations, where it hides amongst the long grass and rushes, and in such situations its nest is usually placed; sometimes also it is concealed amongst the thick matted grass and weeds in the bottom of a furze or bramble bush: it is made of coarse grass and lined with bents.*

The food of the Grasshopper Warbler consists of gnats, flies, maggots, grasshoppers and water beetles, besides all the various sorts of insects which are to be found amongst reeds and other water plants.†

This bird is about the same size as the better-known Sedge Warbler, but slightly exceeds it in length. As I have not been fortunate enough to obtain a specimen for my collection I have taken the following description from Yarrell:—"The beak is brown, the base of the upper mandible paler in colour than the other parts; irides hazel; the top of

* Yarrell, vol. i., p. 296.

† Meyer's 'British Birds,' vol. ii., p. 85.

the head, back and wings greenish brown; centres of the feathers darker brown, producing a spotted appearance; the feathers of the tail graduated and of a uniform brown, the ends triangularly pointed; chin, throat, breast and belly pale brown, spotted with dark brown on the neck and breast; under tail-coverts pale brown, streaked along the centre with darker brown; legs, toes and claws pale brown."

The egg is rather smaller than that of the Hedge-sparrow; of a dull white ground colour, thickly but very minutely speckled with a reddish purple.

SEDGE WARBLER, *Salicaria Phragmitis*. This is also an aquatic warbler, much resembling the last in its habits, but, being more numerous and not so shy, is far better known. It arrives in this country about the same time as the Whitethroat; indeed I have several times noted the appearance of the two birds on the same day, generally about the 19th of April. It is very common about the bushes and rushes on the banks of the river Tone and of all its little tributary streams.

The food of the Sedge Warbler consists of various aquatic and other insects, to which Yarrell says worms and slugs may be added.

Yarrell says the nest is frequently placed at or near the bottom of a patch of thick coarse herbage: it is composed of moss at the bottom, grass and coarse bents at the sides, and thickly lined with hair. Meyer adds that it is always suspended—that

is, the bottom does not touch the ground or rest upon a branch. It must be generally well concealed, as I have never been able to find one, although the birds are numerous in our brook; but then I am a very bad bird-nester.

The appearance of the Sedge Warbler is as follows:—The beak is brown; head olive-brown, streaked with dusky; a streak of dull dirty white extends from the base of the upper mandible over the eye; cheeks, sides and back of the neck olive-brown; back and scapulars the same, the centre of each feather being dusky; rump and tail-coverts olive-brown, with a tinge of rufous; throat, breast and belly white in the centre, with a tinge of yellow on the sides (the breast of one of my specimens, a young bird of the year, is spotted with dusky); quills, primaries and secondaries dusky; tertials dusky, edged with light brown (in the young birds the primaries and secondaries are also edged with brown); tail dusky; legs, toes and claws pale brown.

The egg is about the same size as that of the last species; of a pale olive-brown ground, speckled with a darker shade.

REED WARBLER, *Salicaria arundinacea*. I have never seen a specimen of the Reed Warbler in these parts, but I am told that it is not uncommon in the neighbourhood of Bridgwater, and that it builds there amongst the reeds growing in some of the ponds made near the railway by digging out earth

for embankments and ballast; in the neighbourhood of Bath also it is found near the river.*

The Reed Warbler is a migratory species, arriving in April, and departing again in September. It is very similar to the Sedge Warbler in its general habits as well as the localities it frequents, so much so that Yarrell says wherever the one species is found the other is almost certain to be within a short distance: I have not, however, found that to be the case here.

The nest is generally placed amongst the reeds, and is suspended by being fixed to the stems of two or three of them: a few of the outer blades of grass are twined round the reeds in such a manner as to form a perfect support for the nest: it is usually over the water at a height of about two feet, very deep for its width, this precaution being taken to prevent the eggs rolling out when the reeds are swayed by the wind. "The materials used are fine dead grasses, mixed with a little wool, which is used mostly to finish off the top of the nest, the whole being woven together very compactly. The bottom of the nest extends downwards to a considerable depth, giving the whole an oblong form."† The nest, however, is not always placed in reeds or near the water, but occasionally amongst shrubs, such as

* 'Zoologist' for 1864, p. 9109.

† Id., 1865, p. 9838.

lilacs or laurustinus growing in a shrubbery at some distance from the water.*

The food of the Reed Warbler appears to consist of worms, slugs, aquatic insects and the smaller species of dragonflies.†

The beak is of a pale brown, inclining to yellowish white on the under mandible; the irides brown; the head, neck and all the upper surface of the body uniform pale brown, with a tinge of chestnut, the primary quills being a little darker; the tail is rounded, the outside feathers being shorter than the middle; the chin and throat are white; the breast, belly, flanks and under tail-coverts pale buff, rather lighter in the middle than on the sides; legs, toes and claws pale brown. Although much resembling both the Grasshopper and Sedge Warbler, this bird may be distinguished from them by its more uniform colour and by the absence of the pale streak over the eye: there are some other distinctions mentioned by Yarrell, but they do not appear so obvious.

The eggs are of a greenish white ground colour, spotted and speckled with ash-green and light brown, occasionally (according to Hewitson) much resembling those of the Sedge Warbler, from which,

* Hewitson. There are also various notes in the 'Zoologist' to the same effect.

† Yarrell, vol. i., p. 310.

however, they may be distinguished by their deeper colouring.

NIGHTINGALE, *Philomela Luscinia*. This bird, so much better known to the ear than the eye, is tolerably common throughout the neighbourhood of Taunton, though, in consequence of the dull and uniform colour of its plumage and its shy and retiring habits, it is not often seen. Like most of our warblers it is a summer visitor, arriving in this country about the middle of April; my own notes say about the 21st, but the time of arrival seems to vary considerably, for in the 'Zoologist' for 1866 there is a notice of the arrival of the Nightingale in the county of Suffolk through a series of years, from 1850 to 1866; and the time appears to have varied from April 11th, in 1850, to April 30th, in 1860.

As the Nightingale sings well in confinement it is much sought after by bird-catchers, and consequently I am afraid its numbers are considerably diminished. It is tolerably easy to keep in confinement until the time of its autumnal migration, when, if not carefully attended to, it often dies or beats itself to death against its cage in attempts to escape; but this is not always the case, for with proper care and attention it occasionally lives a long time in confinement. There is a notice in the 'Zoologist' of one of these birds having lived as long as ten years in confinement. There is also a very interesting

account in Yarrell of the Nightingale breeding in confinement: the two parent birds were caught in England after their arrival in the spring, and after they had paired.

The food of the Nightingale consists principally of insects, such as flies, moths and earwigs.* M. Prevost gives a long list of the various sorts of food of this bird; and for once I do not think the most discontented gardener can take exception to a single article in the whole list, which is as follows:—“February, grubs and worms; March, the same, and chrysalids and ground beetles; April, flies, meal-worms, beetles and red-worms; May, butterflies, weevils, cockchaffers and grubs; June, spiders and wood-boring beetles; July, worms, grubs, and eggs of locusts, grasshoppers, moths and flies; August, locusts, glow-worms, weevils and grubs; September, locusts, beetles, worms and dragonflies; October, grubs, worms and beetles; November, flies and worms.” After reading this list,—which, although M. Prevost’s observations were made in France, is like the rest of his lists, for the most part (except the winter months, in this case) applicable to this country,—we must all agree that it is a very great pity Nightingales are not more numerous, if it were only for the benefit they render by the destruction of noxious insects.

* See Yarrell, vol. i., p. 321.

The nest is placed on the ground amongst the roots of trees or upon a hedge-bank: it is made of loose herbage, rushes and grass, and dry leaves, principally oak, and is lined with fine grass.*

In plumage this bird is, as I said before, dull and uniform in its colouring; the beak is brown; irides hazel; head, neck, back, scapulars and wing-coverts brown; rump, tail-coverts and the portion of the tail-feathers next to the body reddish brown; rest of the tail-feathers and quills brown; throat and all the under parts silvery grey, the breast being a shade or two darker than the rest; legs, toes and claws brown. "The young birds have buff-coloured spots on the tips of the feathers of the upper surface of the body, those on the under surface have dark margins."†

The egg of the Nightingale is a uniform olive-brown, without any markings.

BLACKCAP, *Curruca atricapilla*. The Blackcap is both more numerous and more generally spread over the country than the Nightingale, which it nearly, if not quite, equals in song. It is a migratory species, arriving in this country about April: the earliest note I have of its arrival was the 2nd of April, in 1867; but this appears to have been an exceptional year with some of our migratory birds,

* Hewitson.

† Yarrell, vol. i., p. 325.

for, in spite of the severe weather in March, I noticed some arrivals much earlier than usual. It leaves us again in September, though Yarrell says there are instances of its being obtained and heard in the neighbourhood of London, Bristol, and other western localities in winter; and an instance is mentioned, in the 'Zoologist' for 1866, of a female Blackcap being shot in Ireland in December.

The food of the Blackcap is varied: on its first arrival it feeds greedily on ivy-berries, but it afterwards forsakes this food for insects,* small caterpillars, chrysalids and occasionally worms: to these may be added certain fruits, particularly cherries, elder-berries and blackberries.†

The nest is placed in low bushes and shrubs and brambles; it is formed of grass and fine roots, woven together with a little hair or wool and lined with hair.

The beak of the Blackcap is dark horn-colour; irides dark brown; the whole of the upper part of the head is black, whence its name; sides of the throat and ear-coverts grey; all the upper parts are grey, with a slight tinge of pale olive-green; the quills brownish grey; tail the same; throat and all the under parts white, with a tinge of grey darkest on the breast; legs and toes lead-colour; claws

* Montagu's Dictionary, by Newman.

† Meyer's 'British Birds,' vol. i., p. 104.

brown. The plumage of the female is much the same as the male, except that the upper part of the head is reddish brown. Young birds resemble the female, except that the brown on the head is not so conspicuous.

The egg is about the size of that of the Hedge-sparrow, but a little rounder: it has a dull white ground, much smeared with light brown, and there are a few specks of much darker brown.

GARDEN WARBLER, *Curruca hortensis*. This shy unassuming little Warbler is perhaps more common in our county than is usually supposed; its shyness and the quiet plainness of its dress, together with its likeness to some of our other Warblers, causing it to be overlooked or mistaken. It is probably occasionally killed by an irate gardener when found amongst his peas,—of which, by the bye, it is rather fond,—and thrown away as “one o’ them White-throats.” Montagu mentions its being found both in Devonshire and Somersetshire; and Yarrell says it is found as far west as Devonshire. The pair I have in my collection were taken near Taunton.

This bird is the “Fauvette Pettychaps” of Bewick. It is rather a late summer visitor, not arriving until the end of April or beginning of May. In song it is said to be scarcely inferior to the Nightingale. It frequents thick hedges, shrubberies and gardens.

The food of this bird consists of insects, peas and various fruits (cherries in particular) and some

berries: to these Meyer adds the caterpillar of the cabbage butterfly, which he says, though rejected by most birds, is eagerly devoured by the Garden Warbler.

Yarrell mentions, quoting a note from Herbert's edition of White's Selborne, that the nest has been found in a row of peas and pea-sticks in a garden: the usual place, however, appears to be in some low bush or amongst rank herbage: it is made of much the same materials as that of the Blackcap.

The Garden Warbler has the beak dark brown; irides hazel; general colour of all the upper parts greyish olive; quill primaries and secondaries dusky; tertials not quite so dark, and narrowly edged with olive-green; tail the same. The under parts are nearly white, inclining to olive-green on the flanks.

The egg is something like, but rather smaller than, that of the Blackcap: those in my collection, if genuine (I did not take them myself), have much more rufous spots. Hewitson himself, however, seems to be in some doubt on this subject; so I can only advise any of my readers who are collecting eggs, if they are fortunate enough to find a nest of the Garden Warbler, to be very careful in identifying the birds before they take the eggs.

WHITETHROAT, *Curruca cinerea*. The White-throat excites the ire of the gardener more than any other bird, except perhaps some of the Tits, and probably not without some cause; for in the autumn,

if its good fortune has thrown its temporary home near a garden, it brings its whole brood to commit depredations, and to indulge in stolen fruit. The gardener should, however, remember to set off against this the number of fruit- and bud-destroying insects and caterpillars it eats; for the food of the Whitethroat consists not only of fruit and berries, but of insects and caterpillars, particularly the white caterpillar. The stomach of one which I shot in a barley-field in July was perfectly crammed with the remains of various insects, especially the legs and wings and hard cases. Moreover, the young while in the nest are fed entirely upon insects.

Yarrell says the Whitethroat makes its appearance in this country about the third week in April, which agrees exactly with my own observations; for my notes of the arrival of this bird for the last four years vary very little, being the 22nd, 19th, 23rd and 20th of April—very often, as I before remarked, on the same day as the Sedge Warbler.

The nest of the Whitethroat is placed in low bushes, shrubs, brambles and thick hedges, and occasionally, according to Hewitson, in a bunch of nettles: it is very thin, and made of stalks, grass and hair, woven strongly together.

In plumage the Whitethroat is rather a handsome bird. The beak is brown; irides hazel; head, ear-coverts and upper part of the nape bluish grey; back scapulars and tail-coverts brown; wing-coverts

dusky, margined with rusty; tertials the same; the rest of the quills dusky; tail dusky; the outside feather on each side white, with a dark shaft; the two or three next feathers are slightly tipped with white; throat white; breast and belly white, tinged with peach colour; legs pale brown; toes and claws darker brown.

A young bird of the year, shot in July, had the iris lightish grey; the ridge of the upper mandible darkish horn-colour; the rest of the beak pale grey; head and neck olive-brown, darkest on the top of the head; rest of the upper parts tinged with grey; the white on the outside tail-feathers not so pure as in the adult; breast and flanks pale yellowish brown; legs, toes and claws grey: all the rest as in the adult.

The egg of the Whitethroat has a dirty white ground, with a distinct tinge of green in it, minutely speckled, particularly at the broader end, with dusky; but the eggs vary a good deal: sometimes (as in one of Hewitson's plates) they are much blotched and smeared with a darker shade of green: they vary also in size.

LESSER WHITETHROAT, *Curruca sylvia*. The Lesser Whitethroat is a much rarer bird than the last, and very seldom met with in these parts. I have one in my collection shot by myself here, and Mr. Haddon has one also, shot near Taunton. It is a summer visitor, arriving in and departing

from this country about the same time as the last species: it has been shot in England as late as the 13th of October.*

The food of the Lesser Whitethroat consists principally of insects, berries and small fruits: it is not, however, sufficiently numerous to disturb the equanimity of the gardener, as the last species occasionally does.

Hewitson says the nest is found in situations similar to that of the common Whitethroat, and is made outwardly of umbelliferous plants, bound together with spider's webs, pieces of hemp, or any such materials, and lined with a few roots and the flowering heads of fine grass.

The beak of the Lesser Whitethroat is black; the base of the under mandible yellowish brown; irides yellowish white; head and neck dullish grey; back, scapulars and tail-coverts dull hair-brown, with a tinge of olive-green; wing-coverts and tertials hair-brown; primaries and secondaries, as well as the tail, dusky brown; throat and all the under parts white; legs, toes and claws lead-colour.

As I have no egg of the Lesser Whitethroat on which I can depend, I have taken the following description from Yarrell:—"Ground colour white, sparingly spotted and speckled, principally at the larger end, with ash-grey and light brown.

* The 'Zoologist' for 1866 (Second Series, p. 522).

WOOD WARBLER, *Sylvia sylvicola*. The Wood Warbler, or "Wood Wren," as it is more commonly called, is not rare in this county, but its distribution is very local, being pretty common in some parts and scarcely known in others. In my own immediate neighbourhood I have not been able to find it: on the other side of Taunton, however, near Orchard Portman and Monkton, it is more common, as it is also in the neighbourhood of Wiveliscombe. It is partial to thick plantations, which keep it a good deal out of sight. It is a late summer visitor, seldom arriving in this country before the end of April.

The Wood Warbler is a great friend of the gardener, as (according to Yarrell) it eats neither fruit nor berries, its food being insects and their larvæ: of these some are taken on the wing, and some are sought for amongst the upper foliage of trees: small black beetles seem also to form part of its food.

The nest of the Wood Warbler is placed on the ground in woods under a tuft of grass: it is made of moss, dried grass and dead leaves, and is lined with fine grass and hair: like the nests of the Chiffchaff and Willow Warbler, it is domed or hooded.*

Not at present having a Wood Wren in my collection to refer to, I have taken the following

* Hewitson.

description from Meyer's 'British Birds':—"The beak is blackish brown; irides brown; the whole of the upper plumage of this bird is a clear olive-green, including the head, nape, back, scapulars and upper coverts of the tail; the wings and tail are brown, each feather bordered with yellowish white; the green colour of the back extends over the sides of the breast; a brown line extends before and behind the eye, above which is a streak of bright yellow; the cheeks are yellow, tinged with brown and green; the chin, breast and flanks are bright yellow, softening into the purest white on the lower part of the breast, belly and under coverts of the tail; the beak is pale brown; the edges and inside of the mouth are ochre-yellow; the legs and feet are brown." The male and female are alike.

The eggs of this species are, according to Hewitson, very difficult to get—much more so, he says, than those of the Willow Warbler: he describes the eggs of the present species as having a white ground, thickly freckled all over with claret-coloured undefined spots; but they are subject to some variety, both in colour and shape.

WILLOW WARBLER, *Sylvia Trochilus*. The Willow Warbler, or "Willow Wren," as it is more commonly called, is (except the Chiffchaff) the smallest of our summer visitors, like so many of which, it arrives in this country about the middle of

April. Yarrell says it is to be found in greater numbers and more generally dispersed than either the Wood Warbler or the Chiffchaff: this is not quite the case in my own immediate neighbourhood, for here the Chiffchaff is the commoner bird, although the nest of the present species being the easier to find, its eggs are more common in collections. Though a summer visitor, and not a very early one, it would appear, from a note in the 'Zoologist' for 1866, that this little bird does occasionally remain with us during the winter; but its occurrence during that season is very rare.

The food of the Willow Warbler is entirely confined to flies and other sorts of insects. I have often watched a pair of old birds feeding their young: the food brought always appeared to be either flies or caterpillars, especially the small green caterpillars. Yarrell says, "This bird does not eat fruit, and when seen in the garden should be allowed to remain unmolested, as one of the gardener's best friends, from the number of insects it consumes daily." The gardener, however, constantly confounds it with the much-abused Whitethroat, and it suffers accordingly.

The nest of the Willow Warbler is placed on the ground in some open plantation, or frequently in an orchard, generally under cover of a tuft of long grass or weeds: it is covered over, a hole only being left for the entrance of the parent birds: it

is made of moss, dry grass and dead leaves, and lined with feathers. In consequence of the situation in which the nest is placed, I have frequently known it destroyed by being trampled on by sheep or other stock.

The Willow Warbler very much resembles the Chiffchaff, and has often been mistaken for it; but it may be easily known from that bird by the colour of the legs, which in this species are a light flesh-colour, while those of the Chiffchaff are almost black.

In the Willow Warbler the beak is brown; the under mandible pale yellow, brown at the base; irides hazel; the head, neck, back, scapulars and tail-coverts darkish olive-green; wing-coverts and tertials dusky, margined with olive-green; primary quills dusky, with very narrow edges of olive-green on the outer web; the tail-feathers are also margined with the same colour; there is a streak of pale yellow over the eye; the cheeks and ear-coverts are nearly the same as the back, but mixed with yellow; throat, breast, flanks, belly and under tail-coverts dull white, tinged with yellow—there is a darker shade in the breast; legs, toes and claws a pale sort of flesh-colour. In a young bird of the year the breast is a very bright yellow, and the feathers on the upper parts more margined with a yellowish shade.

The eggs very much resemble those of the Blue Tit, both in size and colour, and may easily be mis-

taken for them ; they are of a white ground colour, very much speckled with orange-rusty.

CHIFFCHAFF, *Sylvia rufa*. The Chiffchaff is one of our most numerous as well as earliest summer visitors : Yarrell says as early as the 12th or 14th of March. I have never observed it myself before the 20th, on which day I saw one in 1867, although the snow was four or five inches deep all over the ground : the little bird, in company with some Stonechats, was busily employed in catching insects on a wall against a running stream. Like most of the earlier arrivals, it is late in taking its departure in the autumn, and has been occasionally noticed, especially in the southern counties, during the winter.

The nest of this species, like that of the last, is generally on or quite near the ground : they are both domed, or perhaps rather, as Meyer expresses it, "hooded" : it is made of dried grass, dead leaves and moss, and is lined with feathers. Hewitson says it is occasionally raised above the ground in a low bush.

The food of the Chiffchaff is almost entirely insects. It catches flies much after the manner of the Spotted Flycatcher, and is also said to be very partial to caterpillars and moths.

The beak of the Chiffchaff is dark brown ; irides brown ; head, neck and all the upper parts hair-brown, tinged with olive-green ; the greater and

lesser wing-coverts and all the quills hair-brown; the wing-coverts and tertials more or less margined with olive-green, according to the time of the year; there is a light yellowish streak over the eye; the under wing-coverts are a sort of sulphur-yellow; all the rest of the under parts are white, tinged—or rather streaked—with sulphur-yellow; tail hair-brown; (in young birds and those shot soon after the moult, margined with olive-green; the tinge also of that colour on the upper parts is caused by the unworn margins of the feathers—in fact, the plumage both of this bird and of the last is much altered by these unworn margins); legs, toes and claws dark brown, almost black.

The egg is white, thinly spotted with reddish purple: it is about the size of, but rather rounder than, that of the Willow Warbler.

GOLDENCRESTED WREN, *Regulus cristatus*. The beautiful little Goldencrested Wren, the smallest of British birds, is not at all uncommon with us, and is resident all the year, and, as far as I can find, receives no accession to its numbers during the winter, although in the more northern and eastern parts considerable numbers arrive in the autumn. There is a note in the 'Zoologist' for 1864 on this subject, which says, "There is no doubt whatever about this bird arriving on the Yorkshire coast from abroad. After the 12th of October, as regular as clock-work, the first easterly wind brings us large

flights of Woodcocks from Scandinavia, and these flights are almost invariably preceded by large flocks of Golden Crests. The light-house keeper at Spurn frequently finds large numbers of Golden Crests dead under the lights, having killed themselves by flying against the plate-glass. The Golden Crests invariably precede the Woodcocks."

Mr. Selby has also noticed this arrival of the Golden Crests, as has Mr. Cordeaux in Lincolnshire. Whether any of these new arrivals prosecute their journey as far south and west as our county I think very doubtful. The Golden Crest may, no doubt, be more easily seen, and come more under our notice, in the winter than in the summer, on account of the absence of the thick foliage which conceals it at that period, but I do not think it is to be found in greater numbers at one time than at the other.

The nest of the Golden Crest is very curious, being generally pendant. There is a very interesting description of one of these nests in the 'Zoologist' for 1865, but it is too long to quote here at length: the nest, however, in this case was built in a cedar tree, not resting on a branch, but some of the twigs were regularly built into the sides of the nest, leaves and all. The nest, however, is not always pendant, but is occasionally built upon the upper surface of a branch; and Hewitson adds

that he has seen it placed against the trunk of a tree upon the base of a diverging branch. It is made of moss, wool, grass and leaves, and is lined with feathers.

The food of the Golden Crested Wren consists of insects and their larvæ, also a few seeds and small berries. It seeks its food much after the manner of the Tits, climbing briskly up and down all the small twigs, and diligently peering into every little crevice and bud capable of containing food. It is particularly partial to the fir tree, when employed in seeking its food; but this tree is by no means essential to its existence.

The Golden Crested Wren has the beak black; irides hazel; on the crown of the head of the male there is a crest of brilliant orange-yellow, surrounded by equally brilliant but lighter yellow; this is surrounded with black; nape of the neck, back, scapulars and tail-coverts olive-green; the greater and lesser wing-coverts are dusky, tipped with dirty white, making two lines of that colour on the wings; all the quills dusky, slightly edged with olive-green, the edging broader on the tertials; the base of some of the secondaries and tertials is black; there is also a slight spot of dirty white on the tips; cheeks and sides of the throat dull olive-green; all the under parts dirty white, tinged with olive-green; legs, toes and claws brown. The female has none of the orange-yellow in the crest, the whole being a bril-

liant light yellow: the rest of the colouring is less distinct than in the male.

The egg—the smallest of British eggs—varies in colour, the most common being a white ground, smeared all over with dull rusty: others are slightly spotted with the same colour, mostly at the larger end.

WREN, *Troglodytes vulgaris*. The Wren has been removed by Yarrell from its former place amongst the Sylviadæ, and classed with the Creeper amongst the Scansores, the reason given being similarity in habits and general resemblance in the colour of the plumage: this latter, I imagine, can scarcely be considered a sufficient reason for placing a bird in a class to which it otherwise has little or no resemblance. If similarity of habits is to be considered, the Wren would appear to be much better left where it is, as its habits agree much more with those of many of the Sylviadæ than with those of the Creeper or any other of the Scansores.

The little Wren is a well-known and familiar bird with us: it is generally called the “Kitty,” or more vulgarly the “Kutteley Wren.” It is resident all the year, and its loud song—peculiarly loud for so small a bird—may be heard in almost every month throughout the year.

The nest of the Wren is domed, and is placed in situations too various to enumerate: two very peculiar situations, however, are mentioned in the

pages of the 'Zoologist,' namely, the claws of an Owl which had been hung up in a gamekeeper's "larder," and in the body of a scare-crow Rook hung up in a field. The nest is also occasionally placed on the ground: inside the roof of a summer-house is also a favourite place: one I found in my summer-house a few years ago was very curious, the outside of the nest being formed entirely of the catkins of the Turkey oak, which were left partially hanging down. The materials generally used are moss, grass, hay and straw,—in fact, almost anything that comes handy,—and feathers for the lining.

The food of the Wren consists of insects, of which, says Montagu, it finds a sufficient quantity to support life even in the severest winter.

The general colour of the Wren is brown; the upper mandible is dark brown, and the under pale wood-brown; irides hazel; head, neck, back, scapulars and tail-coverts burnt-umber-brown; there is a streak of pale brown (almost dirty white) over the eye; the wing-coverts and tertials are burnt-umber-brown, with darker streaks on the feathers; the primary quills dark brown, regularly spotted with very light brown; tail burnt-umber-brown, narrowly streaked with dark brown; throat, breast and belly pale wood-brown; flanks and thighs brown, streaked with darker; under tail-coverts the same, each feather slightly tipped with white.

The egg of the Wren is rather larger than that of the Goldencrested Wren; in some specimens white, or almost so; in others white, with very minute rusty specks.

With the Wren ends the Sylviadæ, or woodland birds, the family which, more than any other, is associated with ideas of summer, green fields and the cheerful song of birds. In consequence of the numerous species included in it, and the great number of individuals in some of the species, it may be considered one of the most important families both to the gardener and the agriculturist: from the gardener most of the various species included in the family receive unmitigated abuse, deserved occasionally perhaps by a few fruit-stealers, but how entirely undeserved by many will be apparent to anyone who takes the trouble to study the food of the various species: to the agriculturist they appear to me to do no harm, not being grain-eaters, like so many of the Finches and Buntings, but are constantly of service to him in the destruction of mischievous insects.

Family PARIDÆ.

I now come to the Paridæ or Tits, a family not very numerous in various species, there being only

seven recognized British species, five of which I am able to mention as belonging to Somersetshire: the various species are all numerous in individuals.

GREAT TIT, *Parus major*. The Great Tit, the first in order of the Tits, is a well-known and handsome bird: it is to be seen in all our orchards and gardens at all times of the year, as it is resident here. This bird, like most of its congeners, is supposed to be, and to a certain extent is, mischievous, as in the spring it feeds a good deal on the buds of apple and other fruit trees, picking to pieces not only the buds which have been previously rendered unhealthy by insects, for the sake of the grub or insect that may be in them, but greedily devouring the germ of the healthy bud itself: against this undoubted mischief must be set off the great amount of good done by the continual destruction of noxious insects, as will appear by the following list of food, for this is another of M. Prevost's birds:—"January, beetles and eggs of insects; February, grubs; March, water-snails, beetles and grubs; April, cockchaffers, beetles and bees; May, the same; June, cockchaffers, flies and other insects; July, the same; August, insects and fruit; September, seeds, grasshoppers and crickets; October, berries; November, seeds." Buds are not mentioned in this list, but whoever looks attentively at almost any of the Tits, will see them busily looking for insects amongst the fruit and

other trees, and equally busily picking the buds themselves to pieces and eating the germ.

Yarrell says this bird will frequently kill other birds smaller than itself, accomplishing its purpose by repeated blows of its hard and sharp beak on the skull of the victim, and afterwards pick out and eat the brains.

The nest of the Great Tit is generally in a hole in a wall or tree : Yarrell says also the deserted nest of a Crow or a Magpie is sometimes chosen : the materials used are moss, hair and feathers ; but Hewitson says the eggs are sometimes laid upon rotten wood alone.

The Great Tit has the beak black ; irides dusky brown ; cheeks and ear-coverts white ; head and throat black, glossed with blue, which colour quite surrounds the white on the cheeks ; there is a small spot of white on the nape ; rest of the neck, the back and scapulars olive-green ; tail-coverts greyish blue ; lesser wing-coverts dusky, broadly margined with greyish blue and tipped with white, making a white bar across the wing ; primary and secondary quills dusky, slightly edged with greyish blue ; tertials dusky, rather broadly edged with olive-green and dull white ; tail-feathers dusky, much tinged with greyish blue, especially towards the base—the outside feather on each side has the outer web white, and part of the inner web towards the end the same ; breast and belly yellow, tinged with green ; a black

band runs from the throat down the centre of the breast to the belly; under tail-coverts white; legs, toes and claws lead-colour. In its nestling plumage the Great Tit has the cheeks pale yellow, and the black parts are dull and clouded.

The egg of the Great Tit has a white ground, spotted all over with a sort of brick-dust red.

BLUE TIT, *Parus cæruleus*. This beautiful, though rather mischievous little bird,—the most numerous of any of the Tits,—is resident with us throughout the year. In manners and habits it resembles the rest of its congeners, climbing about the small branches of trees and shrubs, looking out for insects and buds, almost always in company with the other Tits, and generally in the winter to be found also in company with the Lesser Redpole and Siskin, all of them climbing about together in search of food, with the greatest activity assuming positions hitherto unthought of by the best of bird-stuffers or greatest of acrobats.

The food of the Blue Tit consists principally of insects, buds and seeds; occasionally also, especially in the winter, it will pluck grain from ricks. Both Montagu and Yarrell add that it is very fond of flesh, and is a constant visitor to any place where horse-flesh is hung up for feeding dogs: I have not myself observed this partiality.

The nest of the Blue Tit is usually placed in a hole in a wall or tree, or in some crevice in wooden

buildings: it is made of grass, moss, hair and feathers. The old birds are very attached to the spot they have chosen for a nest, and are not easily to be ejected: Hewitson mentions several curious instances of this attachment: one such came under my notice some little time ago. I found my gardener hard at work picking at a hole in the garden-wall: on going up to see what was the matter, I found he was diligently trying to smash a Blue Tit's eggs, and had great hopes of killing the old bird on the nest by poking at it with a stick; but, luckily for the Tit, the hole was small and had a turn in it, so he could not hurt the poor little bird, who stuck most manfully to the nest, hissing like a snake and fighting at the stick: as I would not allow the gardener to pull down the wall the Tit got the best of it, and brought up her brood, not quite in peace, but in spite of numerous interruptions and attacks on the part of the gardener against herself and her young.

The Blue Tit has the beak of a dark horn-colour, almost black; irides hazel; forehead, a streak over each eye passing to the nape, cheeks and ear-coverts white; crown of the head light blue; a black streak passes from the base of the upper mandible through the eye to the nape; a black streak also passes from the under part of the lower mandible down the centre of the throat, surrounds the white on the cheeks and joins the streak through the eye and

passes over the nape; back, scapulars and tail-coverts olive-green; lesser wing-coverts blue, inclining to dusky in the centre of each feather; greater wing-coverts the same, but tipped with white; quills dusky, narrowly margined with blue and white; tertials dusky, tinged with blue, margined with olive-green and tipped with dull white; tail dusky, much tinged with pale blue, the outer feather on each side white; breast, belly and all the under parts sulphur-yellow; legs, toes and claws bluish black.

The egg of the Blue Tit is much like that of the Great Tit, only smaller in size.

COLE TIT, *Parus ater*. The Cole Tit is not quite so common as the last species, though in this neighbourhood more so than the Great Tit. It is resident here throughout the year, and much resembles the other Tits in habits, manners and food, and is to be constantly seen with them. Like the others, its food consists principally of insects and buds: kernels of the stones of fruit also form part of its food, and I have often seen the bird hammering at the shells with its beak to break them.

A short time ago I observed a Cole Tit busily engaged in picking some of the white, mildew-looking substance on an apple tree: I brought some of the mildew in, examined it with a microscope, and found it full of small insects, which the bird must have been eagerly devouring. Montagu,

who kept some young Cole Tits in a cage, observed that they were mostly fed with little green caterpillars.

The nest of the Cole Tit is usually placed in a hole in a wall or tree, usually near the bottom, sometimes at a considerable distance from the entrance—at all events, far enough for both the nest and the bird to be quite out of sight: it is also occasionally placed amongst the roots of a tree or in a mouse hole.* It is made of moss, wool, hair and feathers.

The Cole Tit has the beak black; irides hazel; head and back of the neck (except a spot of white on the nape) black; cheeks, ear-coverts and sides of the throat white; throat black; back, scapulars and tail-coverts bluish grey, the feathers—especially those on the tail-coverts—margined with yellowish rusty; tail dusky brown; wing-coverts dark lead-colour, and both greater and lesser tipped with white, making two conspicuous bars of white across the wing; quills dusky brown, very slightly margined with olive-green; tertials the same, but tipped with white; breast and belly white, running into yellowish rusty on the flanks; legs, toes and claws black.

The egg of the Cole Tit is much about the same size as that of the Blue Tit, and like it of a white ground, with brick-dust-red spots, but the spots

* Hewitson.

appear to be generally rather larger in size and more collected on the broad end.

MARSH TIT, *Parus palustris*. The Marsh Tit is perhaps not quite so common as either of the last three species: like them, however, it is resident with us throughout the year, and is by no means rare. It may be found in considerable numbers in all of our alder and willow beds, and also in company with the other Tits, in our orchards, where, like its companions, it does much service by devouring insects and caterpillars, although it may be occasionally found guilty of the destruction of buds. It also feeds on seeds, especially those of the thistle. I have seen it also busily engaged in eating the berries of the honeysuckle, occasionally picking one off and holding it in its claw, like a parrot, while it was getting out all the edible part; and, in the winter, it is said to be partial to stale flesh.

The Marsh Tit makes its nest in holes in trees, such as alders and willows; and about here apple trees are a favourite resort. The eggs are difficult to get, as the nest is usually placed in a hole too small to allow of the insertion of the hand. According to Montagu, the bird itself excavates a place for the nest: he says he has seen it artfully excavating the decayed part of a tree, carrying the chips in its bill to some distance, always working downwards, and making the bottom for the reception of

the eggs larger than the entrance.* The materials made use of for the nest are moss, wool and grass, and it is lined with thistle-down or the soft down of the willow.

The beak of the Marsh Tit is black; irides dark hazel; head and upper part of the nape black; back and all the upper parts hair-brown, the quill-feathers and tail being a little darker than the rest; cheeks dirty white; chin black; breast, belly and all the under parts dull dirty white, tinged with brown, especially on the flanks; legs, toes and claws bluish black.

The egg of the Marsh Tit much resembles that of the Blue Tit, namely, a sort of brick-dust-red spots on a white ground, but it is rather larger and rounder in form; but, as Montagu observes, the eggs of all the Tits are much alike, and scarcely to be distinguished: they also resemble those of the Willow Wren, Wood Wren and Creeper: those of the Nuthatch are very similar, but considerably larger.

LONGTAILED TIT, *Parus caudatus*. This very peculiar-looking little bird, by no means the least common of the Tits, is resident with us throughout the year. It may constantly be seen, either in little flocks of its own species or mixed up with others of its congeners, in almost all of our planta-

* Montagu's Dictionary, by Newman.

tions, orchards and hedges. Like the other Tits, it is a very lively little bird, constantly climbing the smallest boughs in search of food, or flitting from bush to bush: sometimes a whole flock may be seen following each other from branch to branch through the entire length of a hedge, or streaming one after another across a field to some new hedge or bush.

The nest of the Longtailed Tit is generally placed in the forked branch of some thick bush, often an evergreen: it is a very pretty domed structure, quite covered over, only a hole being left for the entrance and exit of the parent birds. From the form of the nest the bird has obtained in this county the unpoetical name of the "Bumbarrel Bird"; from the same circumstance it has also obtained the name of "Bottle Tit." The materials employed in making the nest are mosses of various colours, woven together with wool and hair: it is thickly lined with feathers. This bird being an early nester, its nest is rather subject to depredations. Meyer mentions having found a nest completed, but without eggs, as early as the 22nd of March, and I have found one, with four eggs in it, as early as the 9th of April: this nest, soon after, when the bird was sitting, got completely saturated with rain during several wet days, but this seemed to make no difference to the old bird, who sat on in its damp abode and duly reared its young.

The food of this bird appears to be almost entirely insectivorous. Yarrell says it appears to be more select in its choice of food than the other Tits, confining itself almost entirely to insects and their larvæ.

The Longtailed Tit has the beak black; irides hazel; forehead, top of the head, cheeks and ear-coverts dull white, spotted on the top of the head with black; there is a streak of black over the eye extending to the nape; back and tail-coverts black; scapulars pink; wing-coverts black; primary and secondary quills dusky; tertials lightish brown, edged with white; tail-feathers very long, the centre ones the longest and black; the exterior feathers on each side become shorter by degrees, the exterior of all being the shortest and white, as are the next three feathers on the outer and part of the inner web; throat, breast and belly dull white; flanks the same, tinged with pink; legs, toes and claws dark brown, almost black. The young birds have the irides lighter than the old; the top of the head white; ear-coverts dull black; cheeks and sides of the neck and all the upper parts dusky brown; the tertials dusky brown, margined (but not tipped) with white; and the tail-feathers, when growing, of variable comparative lengths; the throat, breast and belly white; under tail-coverts just tinged with pink.

The egg of the Longtailed Tit is the smallest of

the Tits' eggs: it is almost white, with a few brick-dust spots, mostly on the broader end.

This bird finishes the Tits: they are, as a whole, a very lively, amusing race, constantly bringing themselves to our notice by their bright and varied plumage and by their lively manners, on which account, as well as for their material services in the destruction of insects, they might well be forgiven a few occasional irregularities in the garden and orchard, in the purloining of buds: perhaps, after all, they only save the gardener a little trouble in the way of "thinning out."

Family AMPELIDÆ.

BOHEMIAN WAXWING, *Bombycilla garrula*. I include the Bohemian Waxwing, or "Waxen Chatterer," as it is, perhaps, more properly called (being quite as uncommon in Bohemia as in England), in the list of Somersetshire birds, on the authority of the following notice in the 'Zoologist' for 1867 (Second Series, p. 633):—

"*Bohemian Waxwing in Somersetshire.*—Mr. Wheeler, taxidermist, of 15, St. Augustine's Parade, has now in his hands, for preservation, a very fine specimen of the Bohemian Waxwing. It was shot at Batcombe Court, Somerset."

This notice was quoted in the 'Zoologist' from the 'Field' newspaper of January 12, 1867, and has

no signature. There was also a note in the 'Taunton Courier' for January 15, 1868, of the Waxen Chatterer having been shot near Chard: I have, however, some doubt about it, as it was described as being like a Jay.

This bird has probably been found in this county at other times, although its capture has not been recorded. It is an occasional winter visitor to England, sometimes in considerable numbers, and has been killed in almost every county, including the neighbouring counties of Devon and Cornwall.

During their occasional visits to England these birds are said to feed on the berries of the mountain ash, hawthorn and ivy: when berries are scarce they are said to feed on insects, catching them in the same manner as Flycatchers.

The following description is taken from Yarrell:—
“The beak is almost black, but light brown on the edges near the base; the irides dark red; the forehead reddish chestnut; the feathers on the top of the head a broccoli-brown and elongated, forming a crest; over the base of the upper mandible, on the lore round the eye, and passing backwards round the occiput on the back part of the crest, an elongated circle of black; nape of the neck light broccoli-brown, becoming darker on the back, scapulars and small wing-coverts; the coverts of the primaries black, tipped with white; primaries and secondaries black, with an elongated patch of straw-yellow at the end of

the outer web of all except the first three; the tertials purple-brown, tipped with pure white on the outer web; four of the secondary quill-feathers, and from one to four of the tertials, depending on the sex and age of the bird, terminate in a small flat oblong appendage resembling in colour and substance red sealing-wax: these appendages are merely expanded and coloured horny prolongations of the shafts of the feathers beyond their webs; upper tail-coverts smoke-grey; tail-feathers smoke-grey at the base, black towards the end and tipped with king's yellow, the shafts of the feathers being slightly tinged with red where the webs are yellow. Under the chin is a patch of velvet-black; at the angle of the mouth the feathers are chestnut, passing on the cheeks, neck and breast, and all the under parts, into pale broccoli-brown, becoming greyish brown on the flanks and abdomen; under tail-coverts chestnut-brown; axillary plume and under surface of the wings ash-grey; all the plumage silky and soft to the touch. Legs, toes and claws black."

Family MOTACILLIDÆ.

Of the Wagtails four out of the five recognized British species may be included amongst the birds of Somersetshire.

PIED WAGTAIL, *Motacilla Yarrellii*. The Pied Wagtail, the first in the list of Motacillidæ, is very

common in these parts, where it is vulgarly known as the "Dish-washer." It is resident with us all the year, and I cannot see that there is any great addition to its numbers at any period of the year, except late in the summer, after the young birds are out, at which time our lawns and croquet-grounds are covered with them; and very pretty and amusing it is to watch the old birds feeding the young with flies and insects, in pursuit of which they may be seen running quickly in all directions, and occasionally flying up after a fly too high to be caught by a jump. In the winter, when the sheep are in turnips, the Pied Wagtails rather desert the lawns and croquet-grounds, and betake themselves to the sheep-fold, where they may be seen busily engaged in their usual occupation of catching flies and other insects. Minnows are mentioned by Yarrell as part of the food of these birds; but I have never myself seen them attempt to take any kind of fish: they appear to me to confine themselves to insects and worms, in search of which last they may often be seen following the plough.

The nest of the Pied Wagtail is placed in a variety of different places, such as the ivy on, or a hole in, an old wall, or in the side of a wood or hayrick. Mr. Jesse, in his 'Gleanings in Natural History,' mentions one very peculiar place: as it is in a workshop of a manufactory in the town of Taunton, I will quote what he says at length:—"The room

was occupied by braziers, and the noise produced by the men was loud and incessant. The nest was built near the wheel of a lathe, which revolved within a foot of it. In this strange situation the bird hatched four young ones; but the male, not having accustomed himself to such company, instead of feeding the nestlings himself, as is usual, carried such food as he collected to a certain spot on the roof, where he left it, and from whence it was borne by his mate to the young." Another curious place is mentioned in the 'Zoologist' for 1863, namely, a Swallow's nest, the Swallows themselves not being allowed even to build another nest in the same chimney.

The plumage of the Pied Wagtail varies much according to the age of the bird and the time of the year. The adult bird in spring has the beak almost black; irides black; forehead, cheeks, ear-coverts and sides of the neck white; top of the head, nape, back, scapulars and tail-coverts black; the lesser wing-coverts black, tipped with white; greater wing-coverts broadly edged and tipped with white; quills black, narrowly margined with white, the tertials broadly so; the outside tail-feathers on each side white, the rest black; throat and breast black; the rest of the under parts white; legs, toes and claws black. The adult female at this time of the year is much the same in plumage, except that the black on the back is not so pure, being slightly mixed with

dark lead-grey. In the autumn and winter both the adult male and female have the back and rest of the upper parts grey, and the throat and under parts white, except a black crescent on the breast. The young bird of the year has the head, neck, back and scapulars grey; cheeks and ear-coverts white, tinged with grey; chin and throat white; sides of the neck and breast dark grey, almost black; flanks grey; primary and secondary quills smoke-grey; the rest of the plumage nearly the same as the adult.

The egg is much about the size of that of the Blackcap: the ground is white, and it is minutely speckled all over, but mostly at the thick end, with two shades of dark grey.

GREY WAGTAIL, *Motacilla boarula*. This, the handsomest of all our Wagtails, is by no means so common in these parts as the last species: it is, however, resident with us throughout the year, although it is said by some authors to be migratory, and probably is partially so, going to the more northern counties in summer and to the southern in winter. Its habits and manners are much the same as those of the Pied Wagtail, except that it is decidedly more aquatic, seldom leaving the neighbourhood of water.

The food of the Grey Wagtail consists of insects, flies, small water beetles and the small Mollusca that may be found in its favourite watery resorts.

The nest is generally placed on the ground on the brink of a stream.* I have, however, found the nest of this bird in a rough stone wall, nearly as much as a hundred yards from a stream. It is generally made of dry grass and roots, and lined with hair.

The plumage of the Grey Wagtail is exceedingly bright and gay; the beak is dusky brown, the edges of both mandibles being light brown; irides dark hazel; head, neck, ear-coverts, back and scapulars light bluish grey; there is a streak of light buff over each eye; the wing-coverts are dark dusky, slightly edged with a lighter shade; rump and tail-coverts bright yellow; tail dusky, the two central feathers edged with yellow, the outside feather on each side white; the two next feathers on each side are also white, except a small line on the outer web, which is dusky; primary and secondary quills dusky; tertials the same, edged with dirty white and yellow; throat and breast white, tinged with buff; belly white and yellow; under tail-coverts very bright yellow, the same as the upper; legs, toes and claws pale brown. In the breeding season the male has the throat black, and the breast at that time is more yellow, and without the tinge of buff.

The eggs are about the same size as those of the last species: the ground colour very dull white,

* See Yarrell, vol. i., p. 433.

slightly tinged and speckled with very dull brownish yellow, but they vary slightly both in size and colour.

GREYHEADED WAGTAIL, *Motacilla flava*. I have not met with this species myself in the county: the two I have in my collection were bought of Mrs. Turle, the birdstuffer at Taunton, and said to have been killed near that place. I have also been informed that in some parts of the county it is considered more common than the Yellow Wagtail (*M. Rayi*), next to be described, for which it has frequently been mistaken.

On the Continent, where this bird is very common, it is said to inhabit wet springy places in moist meadows and the gravelly edges of rivers; and in such places it finds its favourite food, which consists mostly of aquatic insects, flies, moths and small green caterpillars.

The nest appears to be placed in a variety of situations,—in holes in the ground, amongst roots of trees by the sides of ditches, and on the boggy parts of heaths,—almost always in moist situations: it is composed of coarse grass, moss and pieces of heath, and lined with fine grass, roots, moss and hair.

The adult male has the beak black; irides dusky brown; head, ear-coverts and nape darkish grey; there is a dull white line over the eye and ear-coverts; back, scapulars and tail-coverts olive-green,

with a tinge of yellow; wing-coverts dusky, tipped with dull yellow; quills dusky; tertials edged with dull yellow and white; tail dusky, except the two outer feathers on each side, which are white, with a dusky border on the inner web; chin white, which colour extends under the ear-coverts; throat, breast, belly and flanks bright yellow (in my specimens the throat and breast differ from the rest of the under parts by having a more orange tinge in them); legs, toes and claws black. Yarrell says the olive-green on the back of the male loses the yellow tinge in autumn, and has then more of the green, and that the under surface of the body losing brilliancy fades to a primrose-yellow. The adult female in the breeding season is much like the male, the under surface of the body, however, being a paler yellow. In autumn the head of the female is mixed with greenish brown; the throat and breast are buffy white; belly and under tail-coverts primrose-yellow.

The young male in his first autumn plumage resembles the adult female in the breeding season, except that the grey of the head is more mixed with brown and the yellow of the upper part of the breast is clouded with brown and buffy orange; in the following spring the grey feathers of the head exhibit a slight mixture of olive-green, and the chin is yellow, which in the more adult male is white. The young female in spring has the head and ear-coverts greyish brown; the chin and throat buffy

white; the upper part of the breast is mottled with brown.

As this bird appears, from the dates at which specimens have been taken, to be resident in England throughout the year, I have been rather particular in giving a description of the plumage in every period, in order that any of my readers into whose hands a specimen may fall may be able to identify it and to distinguish it from the Yellow Wagtail. A mistake, however, could hardly be made, except in the case of young birds, and in all states of plumage the species may be distinguished by the white streak over the eye, and moreover a specimen taken during the winter is sure not to be the Yellow Wagtail. The descriptions are partly taken from Yarrell and other authors, and partly from my own specimens.

Hewitson says the eggs scarcely differ from those of the Yellow Wagtail.

RAY'S WAGTAIL, *Motacilla Rayi*. Ray's Wagtail, or the "Yellow Wagtail," as it is perhaps more commonly called, is a very beautiful, and not uncommon summer visitor. It is said to arrive in this country as early as the end of March or beginning of April (my own earliest note of the arrival of this bird is the 15th of April) and to depart again in September, about which time, according to Montagu, large flocks collect on the Start and the other southern promontories of Devonshire. It is less aquatic in its

habits than the rest of its congeners, being often found in arable land. It is said to be particularly fond of peas and beans: it also frequents lawns, meadows and pasture lands, and is often to be found amongst sheep and cattle, catching the insects which they disturb. Its food consists almost entirely of flies and other insects.

The nest is placed on the ground, and is formed of dry bents and roots, and lined with hair.

The Yellow Wagtail is a very beautiful bird, the colouring, especially of the breast and under parts, being extremely bright; the beak is black; the irides hazel; the head, ear-coverts, neck, back, scapulars and tail-coverts olive-green; there is a streak of bright yellow over the eyes and ear-coverts; wing-coverts and tertials brown, edged with dull white; primaries and secondaries brown; tail dusky, almost black, except the two outside feathers, which are white on the outer, with a streak of white on the inner, web; throat, breast and all the under parts a very bright rich yellow; legs, toes and claws black. The female is not so bright as the male, and the young bird of the year has the under parts of a much less bright yellow, partially mixed with white, and on the breast inclining to olive-green.

The egg is something like that of the Stonechat, and is occasionally mistaken for it: it is, however, rather larger; the colour is much the same—a

dullish green ground, thickly freckled all over, but mostly at the larger end, with brown.

This is the last of the British Wagtails which I have been able to include in this list. There is one other species recognized as British, the White Wagtail (*M. alba*), but I have omitted it, as I have not been able to identify it myself, nor have I any authority for including it: it may, however, have been overlooked by myself and others, on account of its great similarity to the Pied Wagtail.

Family ANTHIDÆ.

The Pipits, the family which I now have to notice, is considered to include as many as seven British species, four of which are, however, very rare, and have not at present been found in this county.

TREE PIPIT, *Anthus arboreus*. Owing to the use of the name "Titlark," which has been applied to the bird now under consideration as well as to the Meadow Pipit, and occasionally even to the Rock Pipit, considerable confusion has arisen, much of which, as Yarrell observes, might be obviated if we gave up the name "Titlark" altogether. The Tree Pipit has often been confounded with the Meadow Pipit, the two being much alike: they may, however,

be easily distinguished by the hind claw of the present species being shorter and the beak thicker and stronger than that of the Meadow Pipit. Yarrell has mentioned other distinctions, but these two always appear to me to be the most reliable, especially in identifying stuffed specimens. In habits and manners the two species differ considerably: the present species is only a summer visitor to England arriving about the end of April, and is much more addicted to perching on trees or the top branches of low bushes, from whence it will constantly arise, and after hovering in the air for a short time singing it will again return to the same or another neighbouring tree or bush.

The food of the Tree Pipit consists of various sorts of insects, beetles and grasshoppers, as well as flies, gnats and their larvæ.

The nest is placed on the ground, sometimes in plantations or woods, and sometimes under low bushes or tufts of grass, and occasionally on a grassy bank of a wood-hedge:* it is made of moss, roots and dry grass, and lined with finer grass and hair.

The Tree Pipit has the beak dark brown, the base of the lower mandible pale yellow-brown; irides dark hazel; head and neck streaked light brown and dark brown, almost black; feathers on

* Yarrell, vol. i., p. 449.

the back the same colours, the centre of each feather being dark and the margins light; the scapulars and tail-coverts have the margins of the feathers darker than those of the back, and tinged with olive-green; lesser wing-coverts almost black, margined with dull white; greater coverts the same, margined with light brown, shaded to dull white towards the tips; quills dusky brown, slightly margined with light olive-brown, the margins of the tertials being the broadest—one of the tertial-feathers is as long as the longest quill; throat almost white, very slightly tinged with light yellowish brown; the breast is rather more tinged with light yellowish brown and spotted with dark brown; flanks the same, streaked with dark brown; belly and under tail-coverts the same as the throat; tail-feathers the same as the quills, except the outer feather on each side, the greater part of the outside web of which, and part of the inner web, is white, and the next feather on each side has a small white spot on the tip; legs, toes and claws pale yellow-brown, the hind claw shorter than the toe.

Hewitson says the eggs of the Tree Pipit vary more than those of any bird: the general colouring appears to me to be a dirty white ground, very much speckled with a purplish red: some of the varieties also resemble very closely those of the Meadow Pipit.

MEADOW PIPIT, *Anthus pratensis*. The Meadow Pipit, the "Titlark" of Bewick and some other

authors, is a rather commoner species with us than the last: it is resident throughout the year. It is very common amongst the heather on the Quantocks and other wild hills, and, from its partiality for such situations, it has obtained, in some parts of England, the name of "Ling Bird." Yarrell says it may be seen perched on a low bush, but is rarely observed sitting on the branch of a high tree or perched on a rail: I have, however, constantly seen it perched on the hurdles with which sheep are folded when in turnips, as it repairs to the sheep-folds in autumn and winter for food, like the Pied Wagtail, which bird it somewhat resembles in its manner of running quickly along the ground after flies, of which, as well as other insects and worms, its food mostly consists. It also resembles the Wagtails in its lively manners and the almost constant motion of its tail.

The nest of this bird, like that of the Tree Pipit, is generally placed on the ground; but the present species does not appear so much to seek the shelter afforded by thick bushes and shrubs, underneath which the nest of the Tree Pipit is generally placed, being content with the cover of the grass and weeds, amongst which its nest is placed, usually in a hollow of the ground or by a projecting clod of earth: it is made of dry grass and hay, mixed with moss and lined with finer grass and hair.

The whole colour of the Meadow Pipit has a slightly more olive tinge in it than the Tree Pipit.

The beak is dark brown, inclining to light yellow at the base of the lower mandible; irides hazel; head streaked dark dusky brown and olive; nape and ear-coverts olive; over the eye there is a light streak; back and scapular feathers dark dusky, almost black, margined with olive; tail-coverts the same, but the margins are broader, hardly allowing any of the dark part in the centre to appear; greater and lesser wing-coverts dusky, margined with very light brown, almost white; quills dusky, tertials margined with olive; tail dusky, the two centre feathers being margined with olive and the two outside feathers white, except a small patch of dusky in the inner web—there is also a small patch of white at the tip of the two next feathers; throat white, slightly tinged with yellowish olive; a dark broken streak runs on each side of the neck from the base of the lower mandible to the breast; the breast itself white, tinged with yellowish olive, most deeply at the sides, and spotted with dusky; belly and under tail-coverts white, tinged with yellowish olive; the flanks have a deeper tinge of the same; legs, toes and claws light brown; claw of the hinder toe quite as long as the toe. The strong olive tinge on the whole plumage becomes less in the spring and summer, owing to the wearing of the margins of the feathers.

The eggs of the present species in many cases very closely resemble those of the Tree Pipit, and therefore require to be very carefully identified before

being admitted into the cabinet: the most general colouring appears to be a light ground, very thickly smeared and spotted with rusty brown, almost hiding the ground colour in a lightish grey ground, much spotted with dusky.

ROCK PIPIT, *Anthus petrosus*. The Rock Pipit is common throughout the whole length of our coast, but in no other part of the county—indeed, I believe this bird is never found far from the sea: it is resident with us throughout the year.

The food of the Rock Pipit consists of worms and marine insects, for which it may constantly be seen searching amongst the sea-weed and rocks or pebbles on the beach, occasionally running up quite close to the breaking waves. I have occasionally seen Pied Wagtails and Meadow Pipits engaged in this search in company with the Rock Pipit.

The nest of the present species is placed on the ground, either on grass-covered rocks or banks a little above the sea:* it is made of several sorts of dry grass and a few sea-weeds.

The Rock Pipit is larger than either of the last two species. The beak is dark brown on the upper part of the upper mandible, and on the point of both mandibles, the base and edges of both mandibles pale yellow-brown; irides dark brown; head,

* Meyer's 'British Birds,' vol. ii., p. 230.

neck, back, scapulars and tail-coverts dull dark brown, the feathers being slightly margined with a greyish brown, with a slight tinge of olive-green in it, on the tail-coverts; wing-coverts dark dusky brown, tipped and very slightly margined with very pale brown, almost white; quills dusky brown, tertials slightly margined with lighter brown after the moult; throat dull white; sides of the neck dull white, mottled with brown, of which colour there is a line reaching to the breast; breast dull white, much mottled with dark brown; belly and under tail-coverts the same, but not so much mottled; tail the same colour as the quills, except the outside feather on each side, which is a very pale light brown, and the next to it is slightly margined and tipped with the same colour; legs, toes and claws brown, the hind claw is much curved. Varieties of this bird occasionally occur: Yarrell mentions having had one sent him by Mr. Lyte, of Berry Head, which was white on the head, back and under surface.

The eggs vary considerably in colour, the most general being yellowish white ground, mottled over with grey and dusky brown, or mottled all over with two shades of dark brown, so as almost to conceal the ground colour.* Meyer also mentions having had some of the eggs of this bird sent him which

* Meyer's 'British Birds,' vol. i., p. 230.

were taken from the same nest; one was a perfect whole colour chocolate-brown, and one of an even tint of greenish grey, the rest like those above described.

This concludes the list of Somersetshire Pipits: they are a very quiet inoffensive race, by no means conspicuous for beauty of plumage, all of them being rather sombre in colour, consequently escaping persecution for ornaments for hats. They are almost entirely insect-eaters, doing no harm whatever to either the garden or farm. This also concludes the first division of the Insesores, the Dentiostres.

Div. CONIROSTRES.—Family ALAUDIDÆ.

The transition is easy from the Pipits to the Alaudidæ or Larks, the family generally placed first in the second division of the Insesorial birds: the Coniostres, as they are commonly called, from the shape of their beaks, which in all forms more or less of a cone. The whole of the birds in this division are more seed and grain eating than the Dentiostres; therefore the good and mischief done by them to man is perhaps more equally balanced, but I think we shall see, as we proceed to examine the food of the various individuals, that the good predominates. Of the Alaudidæ I have only two

Somersetshire species to mention out of the six that are now included in the British list.

SKY LARK, *Alauda arvensis*. The Sky Lark, which comes first on the list, is a very common bird in these parts, and is well known on account of its beautiful and joyful song, which has been more noticed by writers of both prose and poetry than the song of any other bird, the Nightingale even not excepted. It is resident here throughout the year, though its numbers appear to be increased in hard winters; but this apparent increase is probably owing to its habit of gathering into great flocks—sometimes of many hundreds—at that time of year.

The Sky Lark is another of M. Prevost's birds: his list of food, rather a long one, is as follows:—"January, seeds of wild plants; February, seeds and corn; March, various insects, worms, seeds and corn; April, insects, beetles and corn; May, beetles; June, flies and various insects; July, grasshoppers, worms and corn; August, crickets and grasshoppers; September, insects, corn and seeds of weeds; October, seeds, worms and barley; November, seeds, corn and berries; December, seeds of wild plants." According to this list of M. Prevost's, the good done by the Sky Lark more than compensates for the mischief; but occasionally, in hard winters, immense flocks drop in upon any green thing they can find either

in allotment gardens or in turnip or rape fields, and the mischief they then do is certainly serious: I have a note of such a visitation, dated the 30th of January, 1865: it is as follows:—"Since the late frost set in very unusual numbers of Sky Larks made their appearance, both in flocks and singly: they have nearly destroyed a field of rape for me, there being nothing of the leaves left but the thick stems; the whole field looks like a field of turnips that had been attacked by the "black army," nothing but the skeletons of the leaves being left. I had one shot at this flock, and killed enough for a good dish of Larks, but they were very thin and not good eating; their crops and throats were full of the green rape. Had I been so disposed I might have killed almost any number, for they were so thick on the ground that the one shot I had killed thirteen, and the whole flock almost immediately settled down again in the same field. I also noticed some of the same sort of mischief done to some cabbages in an allotment field near."

In the severe weather, in other winters, I have seen these birds do some mischief, but nothing to compare with that above mentioned. In spite, however, of these occasional inroads, I think that, in consideration of the destruction of various insects and of the seeds of many sorts of weeds, we may fairly decide the question of useful or mischievous in favour of the Sky Lark.

The nest of the Sky Lark is placed on the ground: it is made of dry grass, and lined with finer bents of grass. It seems that this bird occasionally removes its eggs or young to a place of greater safety if its nest be disturbed: an instance of this is recorded in the 'Zoologist' for 1865: "On the 9th of July four young Larks were found in a rudely-scraped hollow in the ground near a bunch of rushes in which the original nest was placed. It had been flooded by the recent heavy rains, and the young birds must have been removed by their parents, for they were not able to move of themselves." Another, but unsuccessful, instance of this is quoted by Yarrell from Jesse's 'Gleanings,' where the old bird was actually seen carrying the young one in her claws, but, her strength failing, she dropped the young bird, and it was killed by the fall.

Sky Larks are easily kept, and occasionally breed, in confinement. They have also been known to attain a great age: one is mentioned in the 'Zoologist' as having attained the advanced age of twenty years, and its song continued almost to the last.

The Sky Lark has the beak dark brown above, pale yellow-brown at the base of the lower mandible; irides hazel; the feathers of the head and nape are dark brown in the centre, margined with light brown; those on the head are slightly elongated, forming a small crest, which the bird can raise at pleasure;

there is a light streak over the eye; the ear-coverts and cheeks are brown and light yellowish brown mixed; feathers of the back and tail-coverts dark brown in the centre, margined with lighter brown; wing-coverts dull brown, the greater slightly margined with lighter brown; quills dusky brown, the tertials more or less margined with a lighter shade; the tail-feathers the same, except the two outside ones on each side, the outer of which is white, with a long streak of brown on the inner web, and the next has a longitudinal streak of white on the outer web; the neck and throat a dull whitish brown, slightly speckled with dark brown; the breast the same, tinged with yellowish brown, especially on the sides, and spotted with dark brown; belly and under tail-coverts nearly white; legs, toes and claws brown, the hind claw very long. The female is rather darker in colour than the male. Varieties of the Sky Lark are not uncommon: they are generally lighter than the ordinary plumage, inclining to buff or occasionally white.

The eggs vary in size—Meyer says from ten lines to an inch in length: the commonest colour appears to be a dirty white ground, much smeared and spotted with olive-brown, or more distinctly speckled with reddish brown: these latter specimens, in my collection, are the smallest.

WOOD LARK, *Alauda arborea*. The Wood Lark is by no means so common in this county as the Sky

Lark, nor is it so in any county of England: according to Montagu it is more common in Devonshire than in any other county at all times of the year. It is resident also in this county, and is most usually seen in August or September in the rough stubble-fields, where it is to be found in little companies of seven or eight, probably the two old birds and their brood.

In the hard weather in the winter of 1867 I purchased a small bag of birds for a shilling from a birdcatcher who was trapping them under a tree; amongst the lot were two Wood Larks. I turned them all out in my aviary, where they all did very well except one of the Wood Larks, which died in a fit about a month after I turned it out: it was probably the male, as it used to sing very softly every bright day, even at that early period of the year (February). The other lived some time, but never attempted to sing.

The food of the Wood Lark consists of insects and worms, as well as grain, and seeds of various wild plants and weeds, such as docks and sorrel, or, as it is called here, "sour dock": my one in the aviary also ate canary and rape seed and bread.

The nest is generally placed on the ground, under cover of a tuft of grass or weeds, or of a low bush: it is made of coarse grass and moss, lined with finer grass and hair.

The Wood Lark has the beak dark brown on the upper mandible and the lower one pale yellow-brown; irides hazel; the head is very dark brown, the feathers being more or less margined with light brown and elongated, forming a slight crest; there is a light streak over the eye and ear-coverts extending to the back of the neck; cheeks and ear-coverts rusty brown; feathers of the back, scapulars, wing and tail-coverts very dark brown, margined with light brown; quills dullish brown, margined very narrowly and tipped with light brown; the margins of the tertials are broader than those of the other quills, and the brown on the inner web is a shade darker than that on the outer web; the outer tail-feather on each side light brown, with a dark brown patch on the inner web, the two centre feathers brown, all the other feathers dark brown, with a spot of white at the end; throat, breast and all the under parts light yellowish brown, spotted with dark brown on the breast; legs, toes and claws light brown, the hind claw straight and half as long again as the hind toe. Yarrell says the female has the spots on the breast more numerous than the male.

The eggs of the Wood Lark very nearly resemble those of the Sky Lark in colour, but are rather smaller in size, and not quite so broad for their length; but, like the eggs of so many other birds, they vary considerably. Meyer mentions a variety in which the ground colour is reddish white, freckled

with ash-grey and tile-red ; and others, he says, are still fuller in tint, with spots of crimson or maroon, intermixed with brown.

Family EMBERIZIDÆ.

The Buntings, the family now under consideration, is not very numerous in variety of species, there being only eight recognized as British, five of which I shall be able to include in these notices as Somersetshire birds.

SNOW BUNTING, *Plectrophanes nivalis*. The Snow Bunting has been shot at Weston-super-Mare,* and probably at many other places in the county, especially in the autumn or tawny plumage, and Montagu speaks of having received several specimens of both the Mountain and the Tawny Bunting from Somersetshire. The Mountain and the Tawny Bunting of Montagu and other older authors have now been proved to be the Snow Bunting in different states of plumage : Bewick, although he gives the Tawny as a distinct species from the Snow Bunting, considers that and the Mountain Bunting identical : these doubts and mistakes have arisen from the great variation of plumage in this bird at

* See ' Proceedings of Somersetshire Archæological and Natural-History Society ' for 1851.

different periods of the year. Montagu considered that the real Snow Bunting—that is, the bird in its summer dress—had not appeared so far West as Somersetshire and Devonshire: that is, however, a mistake, for the bird, although rare in these counties in its summer dress, does occasionally remain long enough in the spring to assume it before its departure. I shot two Snow Buntings on the Warren at Exmouth on the 10th of April, 1867, in summer plumage, and they are now in my collection: a friend who was with me shot a pair in the same plumage the next day. There is also an instance recorded in the 'Zoologist' of the occurrence of this bird in full summer plumage in Cornwall as late as the 10th of May.

The food of the Snow Bunting appears to consist principally of grain, when it can get it, as it is often found, both in its own northern home and in its southern migration, in stubble-fields, especially oat-stubbles, also the seeds of various sorts of grass and weeds: insects and the shelly Mollusca that adhere to the leaves of water-plants have also been mentioned as forming part of its food.

The nest is usually placed in the crevice of a rock or in a loose pile of timber and stones: Yarrell also mentions one having been placed in the bosom of the corpse of an Esquimaux child. It is made of dry grass, and lined with hair and a few feathers.

The term "Snow Flake" has also been applied to this bird, to show the propriety of which name, Dr. Saxby, writing from Shetland, where these birds are numerous, gives the following description:—"Seen against a dark hill-side or a lowering sky, a flock of these birds presents an exceedingly beautiful appearance: it may then be seen how aptly the term 'Snow Flake' has been applied to the species. I am acquainted with no more pleasing combination of sight and sound than that afforded when a number of these birds, backed by a dark grey sky, drop, as it were, in a shower to the ground, to the music of their own sweet tinkling notes."*

The following descriptions of the Snow Bunting are taken from the two shot by myself at Exmouth in April, and also from one shot at the same place in the autumn: the beak is lightish yellow, except the tip and upper part of the upper and the tip of the lower mandible, which is dark horn-colour; irides hazel: there is a streak of rusty brown from the base of the upper mandible to the top of the head, broader on the top of the head; on each side of the brown is a streak of white over the eye; back of the head and nape speckled black and white, with a very slight tinge of rusty brown left here and there; a streak of very light brown from the side of the beak to and under the eye, reaching to the ear-

* 'Zoologist' for 1865, p. 9485.

coverts; ear-coverts darker brown; back and scapulars black, a few of the feathers being still very slightly margined with light rusty and dull white; lesser wing-coverts black, margined with white; the greater wing-coverts are the same, except that the margins are slighter and duller, and some of the feathers are white nearly to the base; primary quills dark dusky, almost black, very slightly edged with white; spurious wing the same; secondaries the same, but with broader margins of white; tertials furthest from the body white, making—with part of the greater wing-coverts—a streak of white on the closed wing; those nearest to the body black, slightly margined with rusty; tail-coverts white, with a very few of the rusty margins left; tail dusky, except the three outer feathers on each side, the basal half of which is white; throat, breast and all the under parts white; legs, toes and claws black at all times.

The other bird shot at the same time differs in having much less white on the head and sides of the neck, which are all grey, or rather perhaps speckled dusky and white.

The bird shot at Exmouth in the autumn differs materially, having the fore part of the head dark rusty, almost black; back of the head, cheeks, ear-coverts and nape yellowish rusty; back and scapular feathers black, but so broadly margined with rusty as scarcely to show any of the black; rump reddish rusty; tail-coverts—those in the centre black, deeply

tipped with rusty; those on the side white, tipped with rusty; wing-coverts white, those of primaries tipped with black; primary quills dusky, tipped and slightly margined with dirty white, white at the base; secondaries and some of the tertials white, the rest of the tertials black, broadly margined with white and rusty; bastard wing black; tail—centre feathers black, tipped with dirty white; the three exterior feathers white, with a small patch of dusky at the tip of the outer web; the next feather on each side has nearly the whole of the outer web white and the inner web dusky; throat white; breast rusty; rest of the under parts white. This is the Tawny Bunting of Montagu, Bewick and other authors. The Mountain Bunting is the young bird of the year, and has less white than either of the others.

The eggs are greenish white, with a circle of irregular umber-brown spots round the thick end, and numerous blotches of subdued lavender-purple: this is the description of the egg given by Yarrell, and agrees very nearly with a supposed specimen in my collection, but not at all with Meyer's coloured drawing.

COMMON BUNTING, *Emberiza miliaria*. I quite agree with Mr. Blake-Knox's observation, in the 'Zoologist,' that the word "Common," as applied to this bird is a misnomer, and that the Yellow Bunting is everywhere the more common.

The Common, or as it is occasionally—and cer-

tainly more properly—called, the “Lark Bunting,” is not very uncommon in parts of the county, and is resident throughout the year; but it seems to be capricious in its choice of localities: in this neighbourhood I have never been able to find it, although the country would appear to suit its habits in every way, except perhaps that the soil is not sufficiently clayey.

The food of this bird consists principally of grain and seeds. Yarrell quotes an instance of its doing much damage in search of the former:—“It could hardly be supposed that this bird, not larger than a Lark, is capable of doing such serious injury; yet I this morning witnessed a rick of barley standing in a detached field entirely stripped of its thatching, which this Bunting effected by seizing the end of the straw and deliberately drawing it out to search for any grain it might contain.” To balance this propensity, certainly mischievous in case of a badly-built rick, this bird feeds also on the seeds of various weeds, and the young birds, as is the case with many of the *Coniostres*, are fed with insects and their larvæ.*

The nest is usually placed on or very near the ground, concealed amongst coarse herbage or thick bramble-bushes: it is made of straw and roots, mixed with dry grass, and is lined with hair.

* Yarrell, vol. i., p. 505.

In plumage the Common Bunting somewhat resembles the Sky Lark, but is somewhat larger than that bird. The beak is pale yellowish brown, the upper mandible the darker; irides dark hazel; head and nape brown, with a narrow streak of dark brown, almost black, in the centre of each feather; back and scapulars the same, but the markings are larger; the tail-coverts nearly the same, with a slight olive tinge and the centres of the feathers not so dark; lesser wing-coverts dark dusky brown, tipped and partly margined with light brown, making a bar of that colour across the wing; greater coverts dark brown, tipped and rather narrowly margined with light brown; quills dusky brown, very slightly margined with light brown, tertials more broadly so; tail rather lighter than the quills; throat very pale brown, speckled with very dark dusky, almost black, chiefly in a streak on each side; breast the same, but with larger speckles; belly and under tail-coverts the same, without the speckles; the flanks are rather darker brown, with elongated dark streaks; legs, toes and claws pale yellow-brown. Varieties of this bird occasionally occur, the most usual more or less white or cream-colour.

The eggs are of a reddish white or pale purple-red ground, streaked and spotted with dark purple-brown; about one inch in length by eight lines and a half in breadth: this is the description given by Yarrell, and corresponds in everything but the length

with a specimen in my collection ; but I do not consider mine to be properly identified. The eggs vary occasionally in colouring.

REED BUNTING, *Emberiza schœniclus*. This bird is very common by all the brooks and rivers in the county. It is resident all the year, but rather changes its abode at times, as it flocks more with its own species, as well as with Yellowhammers and Chaffinches, in the autumn and winter, when it joins those birds in searching for food in the stubble-fields, returning to its old haunts in the spring and summer, when it disperses itself in pairs in search of nesting-places.

The food of the Reed Bunting consists of all sorts of aquatic insects and small Crustacea, which it picks up amongst the reeds and rushes by the sides of streams and rivulets, as well as of corn and seeds of various sorts of grass and weeds.

The nest is generally placed in a low thick bramble-bush, on or near the ground, or in the rough grass by the side of a bank, and occasionally in an old alder stump: it is made of bents, grass, roots and hair.

In plumage the male is a very handsome bird, easily recognized in consequence of the black head, from which it takes one of its names, "Blackheaded Bunting," and the bright white collar round the neck. The beak is dusky brown above and paler beneath; irides hazel; the whole of the head is

black, except a white streak, which extends from the base of the lower mandible down the sides of the throat till it joins a white collar, which extends from the nape of the neck to the breast; back and scapulars reddish rusty, with black centres to the feathers; rump and tail-coverts bluish grey, with dark centres to the feathers, and very slight margins of light rusty; lesser wing-coverts chestnut-red, with a black spot near the centre of each feather; greater coverts nearly black, rather broadly margined with reddish rusty; primary and secondary quills dark dusky, almost black, with very slight light rusty margins; the tertials have the centres black, with broad margins, especially on the outer web, of reddish rusty; the two centre feathers of the tail dusky, with broad margins of brown; the rest of the feathers, except the two outside ones, dark dusky, almost black; outside feathers white, except a spot of dusky towards the tip; the next has the outer web, and a small spot towards the tip of the inner, dusky; the rest of the inner web white; throat and breast black; belly and flanks dull grey, streaked mostly on the flanks with brown; under tail-coverts nearly white. In autumn, after the moult, the black feathers of the head and breast and the white feathers of the collar are broadly margined with rusty, so much so as almost to hide the two distinguishing colours of the head and neck; legs, toes and claws brown. The female has the head rusty brown, the centres of the

feathers being rather darker; there is a light spot of pale yellowish brown over the eye; ear-coverts rusty brown; throat and sides of the neck pale yellowish brown, except a streak of dark brown spots on the side of the throat reaching to the breast; tail-coverts rusty brown; under parts more inclining to pale brown than in the male; the rest of the plumage nearly the same, except that it is not quite so bright. The young birds resemble the female.

The eggs have a dull sort of whitey-brown ground, curiously marked with eccentric dusky streaks and spots, and a few of a lighter shade. I have one variety in my collection, which I should hardly have believed to be that of the Reed Bunting had I not taken it myself and watched the old bird on the nest from time to time till the rest of the eggs were hatched and the young birds flown: all the eggs in the nest were the same, and agreed in almost every particular with those of the Cirl Bunting, for which they might easily have been mistaken.

YELLOW BUNTING, *Emberiza citrinella*. The Yellow Bunting, or, as it is more generally called, the "Yellowhammer," is one of our commonest birds, and is resident with us throughout the year. It certainly deserves more admiration for its beauty than it generally receives: perhaps this is on account of its being so common; were it scarcer it would probably receive a fairer share.

In regard to its food the Yellowhammer is, like

many other of the grain- and seed-eating birds, partially useful and partially mischievous: the usefulness probably in this, as in many other cases, more than counterbalancing the mischief. On this balance most of our small birds have to be judged, and it is as useless for the zealous defender of small birds to affirm, as he often does, that they do no mischief at all, as it is for the gardener and the promoter of Sparrow Clubs to affirm that they do nothing but mischief: a case can almost always be proved against either.

This bird will, like the Common Bunting, extract grain out of ricks, especially loosely and carelessly built ones, by pulling at the end of the straw until it pulls it out ear and all: in a well-built rick the mischief done in this way is very slight, as the straws are too close and firm in the rick to be pulled out without breaking. The principal mischief it does to the farmer is in eating the corn growing near the hedges before it is cut: as a set-off to this, it eats a great quantity of seeds of various weeds, and in the spring and early summer the food of the old birds, as well as of the young brood, consists almost entirely of insects.

The Yellowhammer is easily kept in confinement, and becomes very tame. It is not, as a rule, an early breeder; but exceptions to this rule occasionally occur, one of which was mentioned in the April number of 'Eyes and No Eyes.'

The nest is usually on or near the ground, under cover of a bush, on the side of a thick hedge-row, or on the rough bank of a brook: it is made of moss, roots and hair.

The Yellowhammer is, as I have said before, a very bright and beautiful bird, and has hardly been done the justice to that it would have been if it had been a foreigner or rare accidental visitor. The beak is bluish horn-colour; irides dark brown; the whole of the head, nape, cheeks, ear-coverts and throat very brilliant yellow, with a few black streaks on the head, nape and ends of the ear-coverts, and a few reddish brown spots under the ear-coverts; just under the yellow is a narrow sort of band of olive-green; the feathers of the back have the centres dark dusky, with broadish margins of light rusty, tinged with yellow; scapulars the same; wing-coverts nearly black in the centre, margined with reddish rusty, shaded nearly to white on the tips; rump and tail-coverts chestnut-red; primary quills dark dusky, very narrowly edged on the outer web with yellow; secondaries and tertials the same, margined, most broadly on the tertials, with rusty red; tail-feathers dusky, margined with rusty yellow, except the two outer feathers, which have the greater part of the inner web white and part of the outer yellowish white; breast, belly and under tail-coverts bright yellow, palest on the under tail-coverts, and spotted on the breast with dull dusky; flanks rufous

and yellow mixed; legs, toes and claws light brown. In winter the head is much more marked with black. The female has less yellow about the head, and the general colour is not so bright. The young birds have no yellow on the head, which is a sort of dull rusty brown till after the first moult. Varieties of the Yellowhammer occasionally occur: one rather curious one is described in the 'Zoologist' for 1864, in which the upper parts were deep cream-colour, tail and wing-coverts white.

The eggs are of a dullish white ground, slightly tinged with dull purple, and scrawled all over with brown lines; they are subject to variety. There is a notice in the 'Zoologist' of a perfectly white variety: in this case the nest contained four eggs all white.

CIRL BUNTING, *Emberiza cirrus*. The Cirle Bunting is by no means common in these parts: those in my collection, which I shot here in March, 1864, are the first and the last I have ever seen in my own immediate neighbourhood; I have, however, seen some specimens at Mr. Bidgood's, which were obtained in the neighbourhood of Wiveliscombe.

The species was first added to the list of British birds by Colonel Montagu, who found the Cirle Bunting in South Devon, between Teignmouth and Kingsbridge: he at first supposed it was confined to Devonshire, but he afterwards procured specimens from Somersetshire, near Bridgwater and Glastonbury, on the road from which place to Wells I have

myself occasionally observed this bird. Since the time of Montagu the Cirl Bunting has been found in many other counties, and appears pretty generally spread over England, especially the southern part, but is nowhere very numerous. It is resident here throughout the year, in winter flocking with Yellowhammers, Chaffinches and other small birds in farmyards and stubble-fields.

The food appears to consist of various small seeds and some sorts of grain, in choice of which, however, this bird appears to be rather particular, for Montagu says that wheat and barley were rejected by some young birds which he had in confinement, but oats were greedily devoured after they had been dexterously and quickly deprived of their outer coats: insects also, especially the grasshopper, form part of the food, and the berries of the woody nightshade may also be added to the list.*

The nest is generally placed in a bramble, furze, or some other low bush: it is made of dry stalks moss and roots, lined with hair.

In plumage the Cirl Bunting is not so strikingly handsome as the Yellowhammer. The females of the two species may easily be mistaken for each other. The male has the beak bluish lead-colour; irides hazel; head and nape olive-green, with a few narrow streaks of dusky; there is a conspicuous

* Yarrell, vol. i., p. 521.

streak of bright lemon-yellow over the eye and ear-coverts; ear-coverts themselves olive-green, with very narrow streaks of dusky; beneath this a patch of lemon-yellow, and beneath that again a patch of olive-green, with narrow streaks of dusky; sides of the neck olive-green; feathers of the back and scapulars reddish rusty, with narrow streaks of dusky in the centre and a narrow light margin; rump and tail-coverts dull olive-green, with narrow dark centres to the feathers; lesser wing-coverts olive-green, with dark centres; greater wing-coverts dusky in the centres, broadly margined with dull rusty red; primary and secondary quills dusky, narrowly edged with yellow; tertials dusky, broadly margined with rusty red; tail dusky, the two centre feathers rather broadly margined with olive-brown, and the two outer feathers on each side with a broad patch of white on the inner web; throat black, beneath that a bright lemon-yellow crescent; breast olive-green, behind which, especially on the sides, are some rusty red feathers, with light yellowish margins; all the under parts lemon-yellow, lightest in the under tail-coverts and streaked with dusky on the flanks; legs, toes and claws light brown. After the autumnal moult the black feathers on the throat have light margins, a few of which are still left on my specimens killed in March. The female has the head olive-green, with broader dusky streaks than the male; the rest of the upper parts nearly the same,

but duller; cheeks and ear-coverts dull yellowish brown, spotted with darker; throat dull yellow, spotted with black; breast dull olive, spotted and streaked with dusky; under parts dull dirty yellow, streaked mostly on the flanks with dusky. The young birds resemble the female.* The adult male cannot easily be mistaken for any other bird, but the young birds and the females may easily be mistaken for Yellowhammers; the olive-green, however, on the head and tail-coverts will always distinguish them.

The eggs are very much like those of the Yellowhammer, but rather smaller, of a dull whitish brown, tinged with blue and scrawled all over with dusky.

This is the last of the buntings which I have been able to include in this list. All the species in this family appear to be useful, and also, to a certain extent, mischievous to man, punishing, no doubt, his growing crops, especially round the hedges, and, as has been before mentioned, occasionally damaging his ricks; but this damage is the fault of the farmer himself for putting his ricks loosely and carelessly together. The grain picked up in the stubble-fields, of course, I do not consider mischief; but grain, however obtained, is by no means the only food of these birds, as the old birds feed to a considerable

* See Yarrell, vol. i., p. 524.

extent on insects, and their young ones are almost entirely fed upon this latter food. The gardener, I think, does not complain of the Buntings much, as they do not frequent his garden, keeping more to hedge-rows, lanes and homesteads.

Family FRINGILLIDÆ.

The Fringillidæ, or Finches, the family I have now arrived at, are not only numerous in species,—there being as many as nineteen recognized British, out of which I have been able to notice fourteen as Somersetshire birds,—but many of the species are very numerous: from their number and from the fact that they are all more or less grain- and seed-eating birds, their influence on the garden and the farm is considerable.

CHAFFINCH, *Fringilla cœlebs*. The Chaffinch, or as it is sometimes locally called the “Whitefinch,” is perhaps the most numerous of all our small birds, the well-known House Sparrow even not excepted. It is resident here throughout the year, and does not, as far as I can make out, receive any addition to its numbers during the winter, although at that time it flocks more, and consequently its numbers appear greater than when it is spread over the country singly or in pairs. Being, like the rest of its family,

a grain- and seed-eating bird, it of course does both good and harm to the gardener and the farmer, and we must therefore try to find out in which it exceeds. As it is one of M. Prevost's birds I will begin with his somewhat long and varied list of food :—" January, seeds, berries and kernels of fruits: February, the same and corn; March, the same and insects; April, moths, flies and insects of various kinds; May, cockchaffers, grubs and eggs of insects: June, the same and wild fruits; July, the same and grubs of beetles: August, moths and butterflies; September, eggs of insects, worms and seeds; October, wood-boring beetles, seeds and insects; November, seeds; December, seeds and buds." In this list the good done seems to more than counterbalance the harm, but this list scarcely completes the case either for or against the Chaffinch. Throughout the autumn and winter it flocks in the stubble-fields, gleaning the corn which is left about: it also frequents rick-yards and ricks made in the fields, where, like the Bunting, it pulls out what corn it can, thereby doing considerable damage to badly-built ricks; but, as with those birds, the greatest damage it does to the farmer is in eating the corn round the hedges before it is fit to cut, and in picking up the newly-sown corn and other seeds, such as clover, vetches, &c., before they come up: beyond this I do not know that it can be accused of doing any damage to the farmer. While on the subject of the food of the Chaffinch, I will

quote a note in the 'Zoologist,' which, after giving a long list of its misdemeanours both in the field and the garden, in which latter place the buds of the polyanthus and the seeds of mustard and cress and radishes seem to have great attractions, winds up by saying, "So large is the number of seeds of weeds that the Chaffinch consumes in the course of a year, more particularly of groundsel, chickweed and buttercups, that he without doubt more than compensates for all his misdeeds; and as his summer food partially, and that of his young family exclusively, consists of caterpillars and other noxious insects, he is in reality the gardener's best friend. The Chaffinch also has a habit occasionally of flying from the branch of a tree and returning after the manner of the Spotted Flycatcher, and I believe at that time it is similarly employed in catching insects flying by.

The Chaffinch lives and sings very well in confinement, and eats nearly anything a Canary will, but I have not found it breed in my aviary; this may be for the want of proper materials and a proper locality for its nest, or from the want of a sufficient supply of insect and caterpillar food for its young ones.

The nest is one of the neatest and prettiest of the various structures to be found amongst "Homes without Hands": it is placed in a variety of situations, amongst the ivy or creepers on the side of a wall or tree, in the forked branch of almost any tree (especially an apple tree) or in some low bush. The

nest, which is generally made of greyish moss and is comfortably lined with wool and hair, seems, on account of the neatness of its exterior, to have considerable attraction for artists, who often succeed in making very exact and pretty pictures of the nest, but are not always equally particular as to the eggs they put into it, for I have often seen the eggs of the Hedgesparrow or Redstart put into the nest of the Chaffinch—I suppose because they afford a brighter bit of colour.

In plumage the male bird is bright and gay-coloured, and may well be spoken of as “as gay as a Chaffinch,” on this account, as well as on account of his lively manner and merry song. The beak is bluish red, with a tinge of purplish red on the under surface of the under mandible; irides hazel; on the forehead, immediately over the base of the upper mandible, is a black patch; the top of the head, nape and sides of the neck bluish grey; back and scapulars reddish brown, or rather perhaps bay; rump and tail-coverts green, with a tinge of olive; lesser wing-coverts white, with a small spot of black on the base of each feather, which is scarcely seen; greater wing-coverts black, tipped with yellow and yellowish white; primary and secondary quills dusky, slightly edged with greenish yellow, and some of them are white at the base; tertials nearly black, margined with rusty and dull yellowish white; tail dusky, except the two centre feathers, which are

a sort of lead-grey, edged with green, and the exterior feather on each side, which is white, with a narrow streak of dusky at the base, and the tip of the next feather, which has a patch of white on the inner web; a streak over the eye, cheeks, ear-coverts, throat, breast, belly and flanks palish brick-dust-red, palest on the belly; under tail-coverts nearly white; legs, toes and claws brown. The female is much less varied in colour: the top of the head, nape, back and scapulars are darkish olive-brown; there is a streak at the back of the eye and side of the neck round the ear-coverts much lighter; cheeks, ear-coverts, throat, breast, belly and flanks dull hair-brown; the rest of the colouring is much the same as the male, but not so bright. The young birds in their first autumn resemble the female.

The eggs are well-known, and hardly require description, except that they vary in colour, the most usual being a sort of greenish grey ground, clouded with rusty brown and spotted with dark reddish brown; others have a pale drab ground and are spotted with the same dark reddish brown; and others again have the ground colour quite plain, without any clouding or spots.

BRAMBLING, *Fringilla montifringilla*. The Brambling, "Bramble Finch" or "Mountain Finch," as it is sometimes called, is a very much less common bird than the Chaffinch, and in these parts is certainly only a winter visitor. It is not generally

known to breed in any part of England, although one instance of its doing so in Yorkshire is recorded in the 'Zoologist,' and two supposed instances in other counties are mentioned by Meyer.

The favourite food of the Brambling appears to be beech-masts, of which it is excessively fond: it also eats various sorts of grain and seeds, and in some parts is considered to be of great use to the agriculturist, in consequence of the quantity of seeds of the knot-grass which it eats: many of the Finches seem to be very fond of this grass, and it is always a great treat in the aviary.

The Brambling is easily kept in confinement, and grows very tame. A pair which I have in my aviary are very fond of the seeds of almost all sorts of weeds, especially docks, a good feed of which, like the knot-grass, is a treat to nearly all the birds in the aviary. As a set off, however, to the good the Brambling does in devouring the seeds of weeds, it is undoubtedly a very destructive bird to the young buds of almost every tree and shrub, pulling them to pieces and picking out the germ of both the leaf and flower-buds.

The nest is said to be as neat as, and something like, that of the Chaffinch: it is formed of moss and lined with wool and feathers.

The Brambling is a fine handsome bird, and is very interesting to watch throughout the year, in consequence of the great change of plumage exhi-

bited at different periods, owing to the wearing off of the broad margins of the feathers. The male bird has the beak bluish black; irides brown; the head, neck, back and scapulars black, so broadly margined with rusty orange as scarcely to show the black; in the spring the margins quite wear off, especially from the head and neck, which are then black glossed with blue; rump white; tail-coverts black, margined with rusty; lesser wing-coverts rusty orange; greater black, tipped with rusty orange, forming a bar of that colour across the wing; quills dusky, very narrowly edged with light dull yellow, and with a small portion of white at the base of the outer web; tertials black, rather broadly margined with rusty orange; tail-feathers black, slightly edged with dull yellowish white (the outer feather on each side has a patch of dull white on the inner web); throat and breast rusty orange; belly and under tail-coverts white; flanks rusty orange and white, mixed with a few dull spots; legs, toes and claws light brown. The female has the head dull brown, the centres of the feathers nearly black, the nape dull bluish grey, on each side of which are two irregular patches of black; a streak over the eye, cheeks and ear-coverts dull light brown, tinged with rusty; sides of the neck bluish grey; back dull light brown, tinged with rusty, the centres of the feathers nearly black; scapulars very dull rusty orange; rump and tail-coverts bluish grey dusky and white mixed; quills dusky, very

slightly edged on the secondaries and primaries with light dull yellow; the tertials more broadly margined with dull rusty orange; there is a streak of white on the base of some of the primary and secondary quills; lesser wing-coverts dusky, slightly margined with dull orange rusty, and tipped with dull white, making a bar of that colour across the wings; the greater coverts dusky, almost black, tipped, those farthest from the body with white and those nearest to the body with dull rusty orange; throat and breast dull rusty orange; belly and under tail-coverts nearly white; flanks dull rusty orange and white mixed, and a few spots of dusky.

Yarrell says the eggs are much like those of a Chaffinch, white tinged with yellow and spotted with dark red.

SERIN FINCH, *Fringilla Serinus*. I have considerable doubt about the propriety of including this bird in the Somersetshire list: I do so, however, on the authority of one specimen which was killed in Taunton, in January or February, 1866: it was shown to me by Mr. Haddon, of that town, on the 31st of March, after it had been stuffed and put into a case. I then had some doubt as to the identity of the bird: it struck me at the time as so like a cross between the Siskin and the Canary as scarcely to be distinguished from it, and I thought it might be some escaped pet, as it was shot while feeding with some Sparrows in a back garden in the town. I have,

however, seen it since, in the very fine collection of Mr. Byne, at Bishop's Hull, and compared it with the description of the Serin Finch given by Mr. Newman, in his edition of Montagu's Dictionary, with which it agrees so nearly that I do not think it would be right to omit all notice of the capture, though it is still possible it may be an escaped prisoner.

The Serin Finch is an inhabitant of the South of Europe:* it is very common in the South of France, and a few instances of its capture in Britain are recorded in the 'Zoologist,' although it had escaped the notice of Yarrell and other writers on British Ornithology.

The food of the Serin Finch consists of seeds, mostly those of weeds, such as groundsel, plantain and chickweed. The nest is said to be placed in fruit-trees, beeches and oaks.†

The specimen in Mr. Byne's collection is—as near as I could measure through the glass of the case—four inches and a half in length. The beak is shorter and not so pointed as that of the Siskin, of a darkish horn colour. The plumage is as

* This would rather favour the supposition that Mr. Byne's bird was an escaped prisoner, as—unlike most of our other Finch visitors—this bird coming from the South would probably be a summer rather than a winter visitor.

† Montagu's Dictionary, by Newman.

follows:—Forehead yellow, with a slight mixture of olive-green; rest of the head and nape olive-green; ear-coverts also olive-green; a yellow streak extends from the back of the eye round the ear-coverts to the throat; back light olive-brown, with dark streaks, formed by the centre of each feather being darker; rump and upper tail-coverts yellow; lesser wing-coverts light dull yellow, with a dusky spot on the inner web of each feather; greater coverts dusky, with yellowish tips, making a yellow line across the closed wing; quills dusky, with dirty white edges to the tertials; tail forked and dusky, each feather edged with dirty white or yellow; throat yellow; breast yellow, with dark dusky streaks; flanks dull dirty white, with dusky streaks; belly and under tail-coverts dull dirty white; legs rather faded, but I should think yellowish brown; the colour of the irides I could not tell, as I did not see the bird in the flesh: the bird-stuffer had put in black eyes. This is the description I made in my note-book of Mr. Byne's bird, when it was shown to me by Mr. Haddon, in March, 1866.

The following is the description of the Serin Finch given by Mr. Newman in his edition of Montagu's Dictionary:—"Forehead round the eyes, and a band above the eyes which extends almost to the back of the head, greenish yellow, clouded with grey; from the gape to the sides of the neck

there is an olive stripe; upper parts olive-brown, clouded with cinereous and spotted with blackish; rump and breast jonquil-yellow, the latter shaded with cinereous; there are some dark longitudinal markings on the breast and flanks; on the wings are two transverse bands, one green-yellow, the other brown-yellow; tail slightly forked; belly yellowish white, with longitudinal blackish markings; length four inches and from four to five lines. The female in autumn has the colours much brighter, the upper parts clouded with cinereous, the under parts of a dingy yellow, with a great number of longitudinal spots. In the spring both sexes have the yellow much purer. In the young of the year the yellow tints on different parts of the plumage are much less pure, especially on the head: in its nesting plumage grey and greenish red are the predominant colours, dashed with longitudinal brown markings."

The eggs are white, with a circle of brown and reddish dots and spots at the larger end.*

TREE SPARROW, *Passer montanus*. The Tree or Mountain Sparrow, as it is sometimes called, is by no means a common bird in this county. Most of the Somersetshire specimens that I have seen have been taken in the neighbourhood of Wiveliscombe, where it seems to be tolerably numerous. It is

* Montagu's Dictionary, by Newman.

resident with us throughout the year, but in its distribution—not only in Somersetshire but all over England—is extremely local: Yarrell says it is not contained in the Catalogues of Dorset or Devonshire, and in Cornwall one specimen only seems to have been noticed, and that is in the Museum at Falmouth; in other counties, however, it is not very uncommon.

The nest of the Tree Sparrow is usually placed in a hole in an old decayed or pollard tree; other places are, however, occasionally chosen, as in the thatch of a barn or other old building; the deserted nest of a Magpie or Crow has also been mentioned: it is formed of hay and lined with feathers.*

The food of the Tree Sparrow appears to consist of both seeds and insects, also of the fresh shoots of seeds and vegetables.† Meyer also mentions an instance in which the crops of about twenty individuals were examined and only one contained corn,—namely, two or three grains of barley,—but the seeds of fifty different sorts of weeds growing in the neighbourhood were found. This bird, however, is not sufficiently numerous to have any great effect, either for good or for ill, on the farm or in the garden. It is easily kept in confinement and may be fed like a Canary or Goldfinch.

* Yarrell, vol. i., pp. 542, 543.

† Meyer, vol. iii. p. 77.

The Tree Sparrow is a rather smaller and more slightly-made bird than the well-known House Sparrow, and, though not very brightly coloured, is nevertheless a very pretty bird. The beak is dark bluish lead-colour, nearly black; irides hazel; head and nape reddish chocolate-colour: from the base of the upper mandible to the eye there is a narrow streak of black which passes under the eye and over the ear-coverts; the ear-coverts are also black; cheeks and a broadish streak down the sides of the neck, broadening at the base and forming a sort of collar from the breast, dull white; back and scapulars reddish brown, streaked with black; rump and tail-coverts olive-brown, the centres of the feathers narrowly streaked with dusky; lesser wing-coverts black, slightly edged with reddish brown and tipped with white, making a bar of white across the wing; the greater wing-coverts are the same, the white tips making a second bar across the wing; quills dusky, edged more broadly at the base and about half-way down with light yellowish brown; tertials black, rather broadly margined with reddish brown; throat to the centre of the breast black, rest of the under parts a sort of dull smoke-colour; legs, toes and claws pale brown.

The egg of the Tree Sparrow, except that it is rather smaller, is much like that of the House Sparrow—namely, white, much speckled with dusky.

HOUSE SPARROW, *Passer domesticus*. I now come to our familiar old friend the House Sparrow, common and impudent here as he is everywhere else, a sturdy beggar about our houses for crumbs or anything eatable in the winter, and partially retiring to the corn-fields in summer and later on to the corn-ricks to pick up a living by robbery: his food consists of almost anything he can get, and is so varied that although he is one of M. Prevost's birds he does not attempt to give a list of the House Sparrow's food, as he does that of other birds, but contents himself with the following notice:—"It varies its food according to circumstances. In a wood, it lives on insects and seeds; in a village it eats seeds, grain, grubs of butterflies, &c.; in a city it lives on all kinds of *débris*; but it prefers cockchaffers and some other insects to all other food." This I know is contradicted by some writers, who affirm that it only eats insects when no other food is to be had. I have, however, myself constantly seen it eagerly devouring spiders, after which it may be seen pertinaciously peering into the corners of the windows, crevices in walls, and deep cuttings in ornamental work; in addition to this piece of out-door housemaid service the House Sparrow is of great use in the garden by the destruction, amongst other things, of caterpillars, of which the food of the young birds in a great measure consists. Amongst the various peccadilloes committed by this species may be enumerated,

besides the consumption of various sorts of grain, which they devour in the rick-yard when they can get it (always preferring a wheat to a barley rick), and in the field, occasional inroads on green peas and various sorts of garden-seeds in the kitchen-garden, and in the flower-garden on crocuses, of which they are said to be great destroyers: I have never myself observed this particular piece of destructiveness.

The nest of the House Sparrow is placed in a variety of situations: in holes in walls; under the roofs and thatch of old buildings; in the tops of water-pipes, which are often completely stopped up in consequence; in ornamental curved friezes and coignes; it is occasionally also built in trees, in which situation it is always a large, untidy, clumsy-looking structure: it is, however, very warm within, being lined with a great quantity of feathers, and covered over, or "domed," as it is called: outwards it is made of hay, straw, roots, shreds of cloth, and nearly anything that comes handy and can be turned to account.

The House Sparrow is so common and well-known that any description is almost superfluous, except to distinguish it from the Tree Sparrow, and to show that it is not quite what I once heard all our British birds called, "dull little brown things, with no variety of colour." In the male, then, the beak is bluish lead-colour; irides hazel; top of the head ash-

grey, between the beak and the eyes black; back of the head and nape reddish brown; ear-coverts and sides of the neck dull dirty white; back and scapulars reddish brown; the centres of the feathers black; rump and upper tail-coverts dull pale brown; some of the lesser wing-coverts are broadly tipped with white, making a conspicuous bar of that colour on the wing; greater wing-coverts black, broadly margined with reddish brown; tertials the same; the rest of the quills dusky, narrowly edged with reddish brown; tail-feathers dusky brown, edged with dull light brown; throat and breast black, interspersed on the lower part of the breast with smoke-colour; rest of the under parts a sort of smoke-colour; legs, toes and claws brown. The female has the top of the head and nape dull rusty brown; there is a light buff streak from the back of the eye to the nape; the tips of the lesser wing-coverts are buff, instead of white, and the margins of the rest of the feathers on the upper surface are considerably tinged with lightish buff; the chin, sides of the throat and all the rest of the under parts are a lightish dull brown. Varieties of this bird frequently occur, the commonest of which are either white or spotted with white: one of the former I have in my collection; it was killed on the other side of the Quantocks. A very curious variety is mentioned by Mr. Blake-Knox at p. 9467 of the 'Zoologist' for 1865:—"Entirely black, with the legs and bill

orange." Mention of a black variety of Sparrow is made also at p. 9531 of the 'Zoologist' of the same year.

The egg is much like that of the Tree Sparrow, but somewhat larger: it is somewhat subject to varieties, but the general colour is a white ground with numerous dusky spots; some are much more thickly and not so distinctly spotted, so as almost to hide the ground-colour and to give the whole a sort of grey appearance.

GREENFINCH, *Coccothraustes chloris*. The Greenfinch, or "Green Linnet," as it is perhaps more commonly called about here, is another very common bird, and is resident all the year. Like others of the Conirotres it does some damage by devouring corn round the hedges before it is cut, and afterwards from the ricks, if they are sufficiently loosely put up to allow it to do so: it also picks up some garden-seeds, but, on the other hand, destroys a good many insects.

M. Prevost's list of the food of this bird is as follows:—"January, seeds, berries, wild fruit and worms; February, the same; March, the same; April, the same and insects; May, the same; June, the same; July, the same; August, the same; September, seeds, berries, wild fruit and worms; October, the same; November, the same; December, the same." This list resolves itself into seeds, berries, wild fruit and worms, throughout the year, with the

addition of insects during the summer months, which would rather bear out the assertion of Yarrell that the young are for a time fed upon insects; but it seems that this is not the case, as, although the old birds may eat insects during the summer months, it has been shown by dissection of the young that they are fed entirely on unripe or sprouting seeds of weeds and garden-plants.*

In confinement the Greenfinch is easily tamed, and eats anything in the way of grain or seeds: the pips of apples I have also found a very favourite food, but I do not think it cares much for the other part of the apple, but if it be cut open will eagerly pick out and eat the pips. It breeds readily in confinement, and increases rather too quickly for an ordinary aviary.

The nest is usually placed in thickish shrubs and bushes or hedgerows, and sometimes tolerably high up on trees. In confinement I generally find it places its nest in some furze-bushes which I contrive to stick up in the roof of the aviary. In a wild state the nest is made of roots, small sticks and bits of moss, and lined with hair and feathers; in confinement it makes use of hay and bents of grass—in fact, of anything suitable with which it may be supplied.

The adult male Greenfinch is a bright, handsome

* 'Zoologist' for 1866 (Second Series, p. 481).

bird: the beak is a pale flesh-colour; irides hazel; nearly all the upper parts darkish olive-green; the rump and upper tail-coverts the brightest and most tinged with light green; greater wing-coverts and tertials dusky grey, darkest in the centre of the feathers; the wing from the carpus to the base of the primaries is bordered with bright yellow; quills greyish black, edged for about two-thirds of the way with bright yellow; the tail has the two centre feathers dusky grey, the rest have the basal half bright yellow and the tips dusky; chin yellow; rest of the under parts olive-green, lighter and more tinged with yellow than the upper parts; under tail-coverts light yellow; legs, toes and claws pale wood-brown. The female is duller in colour, and nearly all the plumage is much tinged with dull brown. The young birds are something like the female, but at first are nearly all olive-brown and the beaks are dark bluish horn.

The eggs are a very pale whitish green, spotted on the upper thick end with two shades of reddish brown.

HAWFINCH, *Coccothraustes vulgaris*. The Hawfinch, or, as it is occasionally called, the "Grosbeak," is a rather rare winter visitor to these parts, never remaining through the summer, although in rather more northern counties, and even as far south as the neighbourhood of London, it is known to remain through the summer and to breed.

The food of the Hawfinch consists principally of the kernels of the stones of various sorts of fruit, both wild and cultivated, amongst which may be enumerated the stones of damsons, plums, sloes and laurel-berries. According to Mr. Doubleday it commits considerable depredations in the garden, especially amongst young peas : * it is not, however, sufficiently common in this county at any time—certainly not in green-pea time—to cause much uneasiness in the minds of our gardeners.

In confinement this bird grows very tame, although if caught after it has come to maturity it is occasionally, like some other birds, rather sulky at first : this, however, is easily got over, and, as it will eat any sort of grain or seed, it is very easily kept.

The nest is placed in various positions, in trees or shrubs, amongst which may be mentioned the whitethorn, the oak, the holly, the fir and the apple-tree ; it seems to be rather a rough structure of twigs, roots and moss lined with fine roots : in one instance, mentioned by Yarrell, the whole of the lining was of gardener's bass.

The Hawfinch is a fine handsome bird, considerably larger than the last-mentioned species. The

* See paper, in the 'Magazine of Zoology,' by Mr. Henry Doubleday, who also adds that its favourite food is the seed of the hornbeam.

adult male has the beak bluish;* irides greyish white: round the base of the beak, and a streak from the gape to the eye, black; forehead yellowish white; back of the head, cheeks and ear-coverts yellowish brown; a collar round the back of the neck grey; back and scapulars dark reddish brown; rump and tail-coverts yellowish brown; the lesser wing-coverts are generally black, but a few are white, forming, with some of the greater wing-coverts (which are white also), a largish white patch on the wing: the rest of the greater wing-coverts nearest the body are dull yellowish brown; primary quills black, with a patch of white on the inner web; secondaries black also, but beautifully glossed with blue, as are some of the primaries nearest the body (some of these feathers are very peculiarly shaped, having a sort of hook at the end of the narrow outer web); some of the tertials nearest the body are yellowish brown; tail has the basal half, and a long strip of the outer web of each feather, black, the rest white, tinged with brown on the outer web; throat black; the rest of the under parts brownish fawn-colour; legs, toes and claws pale wood-brown. The female is not so distinctly marked as the male; the secondary quills are rather broadly margined with

* Mr. Doubleday, in the paper above alluded to, says the beak in winter is pinkish horn, but becomes deep blue in the breeding-season.

grey, and the greater part of the primaries is dusky rather than black; the tail the same, with only dull white spots on the tip of each feather. The young birds of the year have the head, neck and upper parts olive-brown; the white on the wing is less conspicuous; the throat yellow, bounded by a small line of brown spots, which indicate the outline of the black patch on the throat; rest of the under parts paler than the upper, each feather tipped with brown. This description of the young birds is taken from Yarrell and Mr. Doubleday's paper.

The egg of the Hawfinch is generally of a pale greenish ground, marked mostly at the thick end with spots and scrawls of dark dusky, almost black, and a lighter shade of dusky: some varieties are said to be almost, or quite, without spots.

GOLDFINCH, *Carduelis elegans*. This, the most beautiful of all our Finches, is, I am glad to say, not very uncommon in these parts, but continues to keep up its numbers in spite of the repeated attacks of the bird-catchers, who come every spring in pursuit of it, as it is much prized as a cage bird, both for its beauty and its song. It is easily kept in confinement. and, like the Siskin, it may be made to pair with the Canary.

The Goldfinch is resident here throughout the year, flocking together in small flocks in the winter and spreading over the country in pairs in the breeding-season. It is generally a useful bird, both

to the gardener and the agriculturist, its food consisting principally of the seeds of various sorts of weeds, such as thistles, groundsel, plantain, chick-weed &c.; the young birds are for a time mostly fed upon caterpillars and other insects.* In confinement they may be kept on the same food as the Canary, but always show a great partiality for green food and wild seeds.

The nest is a very pretty, neat structure, quite as neat as that of the Chaffinch: it is placed in low, thick bushes, sometimes evergreens, and occasionally in apple-trees: it is made of grass, fine roots, moss and wool, and lined with willow-down, feathers and hair: if it is supplied, even in its wild state, with anything better suited to its purpose it will make use of it.†

The Goldfinch, as I said before, is the brightest and gayest-coloured of all our Finches: it is somewhat smaller, and more slender in form, than the Chaffinch. The beak is nearly white, the point dark horn-colour; irides dusky brown; forehead, and all round the base of the beak as far as to the eye, crimson; top of the head, and a circle at the back of the cheeks and ear-coverts, black; cheeks and ear-coverts dull whitish brown; there is a lightish spot on the nape; back, rump and scapulars yellowish

* Yarrell, vol. i., p. 568.

† Id., p. 567.

brown; tail-coverts lighter, nearly white; lesser wing-coverts black; greater wing-coverts bright yellow; the primaries have the outer edge of the basal part bright yellow, the rest black, as are the other quill-feathers, the tertials, however, and some of the secondaries being tipped with white; tail black, the centre-feathers tipped with white, the rest have a broad white patch on the inner web; throat nearly white; breast and flanks yellowish brown, but lighter than the back; belly and under tail-coverts nearly white; legs and toes pale flesh-colour; claws brown. The female has rather less of the crimson round the beak, and that is occasionally speckled with black; the lesser wing-coverts are brownish; the rest like the male. The young birds of the year have none of the red or black, the whole of the head being brownish.

The egg of the Goldfinch is a dull greenish white ground, slightly spotted—mostly at the larger end—with dull reddish brown; there are also a few spots of a darker brown.

SISKIN, *Carduelis spinus*. The Siskin, or “Aberdevine,” is a rather irregular, but occasionally numerous, winter visitant: it makes its appearance at any time from November to March, generally in hard weather: its stay is also somewhat regulated by the crop of alder-seeds which are to be found and which form its principal food during the winter, and in search of which it may be seen climbing the slen-

derest twigs of the alder-bushes, sometimes in small companies of its own kind and sometimes mixed up with Tits and Lesser Redpoles.

The Siskins pick out the seeds from the catkins of the alders with great dexterity, hanging for this purpose from the twigs in all sorts of attitudes; sometimes sideways, sometimes with their heads down, and occasionally flying to the ground after a fallen catkin: besides this they eat the buds of various trees, picking out the germ and also the seeds of weeds. In confinement they grow very tame and are easily kept, feeding on canary, rape, hemp or any other bird-seed, but still showing their partiality for the seeds of the alder when they can get a supply: they will also pick up the seeds of grass, docks, thistles, or any other weed that is offered to them.

The Siskin occasionally breeds in confinement and crosses readily with the Canary, and also, I believe, but not so readily, with the Lesser Redpole. In its wild state it is not generally supposed to breed in England: two instances, however, of its doing so in the County of Surrey are mentioned by Meyer. In Scotland it frequently remains to breed.

The place usually chosen for the nest appears to be high up in a spruce or other fir-tree; but it will occasionally, probably in the absence of high trees, make its nest in a furze or other low bush; it is said

to be formed of much the same materials as that of the Chaffinch.

The Siskin is a very pretty and gaily-marked bird. The beak is orange-brown, darker at the tip; irides dark-brown; top of the head, and higher part of the nape, glossy black, mixed on the nape with olive-green; there is a light yellow streak over and at the back of the eye and down the sides of the neck; ear-coverts olive-green; back and scapulars olive-green, with very narrow dark streaks down the centre of each feather; rump much more yellow, but still tinged with olive-green; tail-coverts olive-green, tinged with dusky; lesser wing coverts olive-green, the bases of the feathers dusky; the greater wing-coverts black at the base and olive-green at the tips; primary quills dusky, narrowly edged with yellow; secondaries and tertials yellow at the base, the rest of the feather black, with a narrow margin of yellow towards the tips; tertials the same, but with broader margins: basal half of the tail-feathers bright light yellow, the tips of all the feathers and outer web of the outside feather on each side black, the shafts of the feathers also are black. The throat in the adult male is black; under part of the neck, breast and flanks greenish yellow, lighter, almost white, on the flanks and streaked with dark dusky; belly and under tail-coverts white, streaked with dusky; legs, toes and claws brown. The female has no black on the head or throat, the head being like the back, and

the throat like the rest of the under parts: the rest of the colouring is duller than that of the male.

The eggs, like the bird, are rather smaller than those of the Goldfinch, but something like them in colour, the ground being a pale light green, inclining to white, spotted mostly at the larger end with purple and dark brown.

LINNET, *Linota cannabina*. This bird, so beautiful in spring in consequence of the bright vermilion colour it assumes at that time on its breast, and at other times coming very much under the general description of a little dull brown bird, is resident throughout the year with us, flocking, like many of its congeners, during the winter and separating in pairs in the spring and summer. Common as it is with us, I have never anywhere seen it so numerous as it is in the Channel Islands, in all of which it is the common bird, outnumbering House Sparrows and Chaffinches both put together.

The food of the Common or "Brown Linnet," as it is sometimes called, consists principally of insects, grain and seeds. M. Prevost gives the following list of the food of this bird:—January, seeds and berries; February, the same; March, the same; April, the same; May, the same and insects; June, the same; July, the same; August, the same; September, the same; October, berries, seeds, buds and fruit; November, the same; December, the same." To this list may be added the seeds of

various weeds, such as dandelions, thistles, groundsel and docks; also the seeds of rape, hemp and flax.

The nest of the Linnet is generally placed in some low bush, especially a furze-bush, on some open common: it is, however, occasionally placed higher up: a whitethorn and a fir-tree are both mentioned by Yarrell. In Guernsey I have often found the nest tolerably high up in the branches of a thick Ilex and of a variegated holly. It is made of small twigs and bents of grass, and lined with wool, feathers and hair.

This bird assumes a change of plumage in the spring, or breeding-season, in a manner totally different from any bird I have yet had occasion to describe, though common to many others which are to follow, especially amongst the Grallatores. When the time arrives for these birds to put on their spring dress or "*habit des noces*," as the French call it, the change of plumage is not effected either by moult or by the wearing-off of the margins of the feathers, but some colouring secretion is put forth which gives to the feathers a totally different colour; in this case the feathers on the breast assume a bright scarlet: this colour is assumed in the spring gradually, but rather rapidly.

Though the Linnet is easily kept in confinement, it is said never to assume this bright scarlet on the breast, nor does it ever breed in confinement: both

these assertions are thoroughly borne out by my own experience, as although I have often kept Linnets in confinement, and that in a good-sized aviary, I have never found them either attempt making a nest or assume the red breast. If taken in the spring, after they have assumed the scarlet breast, they do not lose it till the autumn moult.

The beak of the Linnet is a bluish lead-colour; irides hazel; there is a patch of bright scarlet on the forehead, the rest of the head and neck are brownish grey; back, scapulars and wing-coverts rich reddish brown; rump yellowish brown and white; the tail-coverts are very pointed, black, margined with white; primary quills dark dusky, almost black, a few of them are margined on the outer web with pure white, which makes a conspicuous patch of that colour on the wing; secondaries dusky, margined on the outer web with dull brown and tipped slightly with dull white; tertials not so dark and more broadly margined, especially on the outer web, with brownish; tail-feathers dark dusky, almost black, edged rather more broadly on the outer web with white, the four centre feathers are very pointed and edged all round with white, but not so pure as the white on the other tail-feathers; throat dullish white, streaked with dusky. The breast, in the spring and summer, is a beautiful bright scarlet, so bright that in painting the bird it is scarcely possible to make it too bright: the bird

begins to assume this colour in the early spring; it makes its first appearance as a sort of dullish dark red in the centre and lower part of the feather, and gradually, but rather rapidly, spreads over the whole feather, increasing in brightness till it develops itself in the bright scarlet before described; the red upon the forehead also develops itself much in the same way. In autumn and winter the breast is yellowish brown, mixed with dull white, streaked with dusky; flanks the same; the belly and other tail-coverts are much the same, but lighter; legs, toes and claws brown. The female, as a rule, does not assume the red breast, but that it does so occasionally would appear from the following observation of Yarrell:—"The female has been taken with a fine red breast, but this is not generally the case." Varieties of the Linnet occasionally occur; one is mentioned by Mr. Blake-Knox,* as having the head entirely white and the rest white and brown; and another is mentioned as having a saddle of pure white across the back.†

The eggs of the Linnet are of a light greenish ground, with dark purple brown spots of two shades, mostly round the thicker end; in some the spots are all of one colour, and are more spread over the whole egg.

* 'Zoologist' for 1864, p. 8877.

† Id., 1865 (Second Series), p. 262.

LESSER REDPOLE, *Linota linaria*. The Lesser Redpole is a rather more regular winter visitor than the Siskin, but still it is not as regular in its visits as the generality of our migratory birds: it makes its appearance here generally in October,—the 8th of that month is the earliest note I have,—and stays with us till about the middle of March, when it retires northward to breed. It, however, partially, if not entirely, assumes its breeding-season dress before its departure. I have one in my collection killed here on the 7th of March, which has a beautiful bright pink breast. Although, as far as I know, it does not breed in this county, it does so in many counties in England, notices of its nest having been found appearing from time to time in the pages of the 'Zoologist.'

The food of the Lesser Redpole, like that of the Siskin, which bird it much resembles in its general habits, consists of the seeds of the alder and the young buds of other trees, especially the birch; consequently when a large flock of Lesser Redpoles pitch into a plantation they do some considerable amount of damage: they also eat the seeds of various plants and weeds, such as the thistle and dandelion, the seeds of moss also, and in summer they vary their diet by the addition of insects to their list of food.

The nest is said to be built in a bush, or low tree: it is made of moss and dry bents,

and is mixed with down from the catkins of the willow.

The Lesser Redpole is almost, if not quite, the smallest of our Finches. It has the beak yellowish brown, the tip being dark horn-colour; irides dusky brown; there is a crimson spot on the forehead at all times of the year; the rest of the head and nape are light yellowish brown, streaked with dark brown: cheeks and ear-coverts yellowish brown; back and scapulars nearly the same as the head, but a shade darker, and the markings are larger; on the rump the light markings become nearly white and yellowish again on the tail-coverts; the wing-coverts are dusky brown, tipped with dull brownish white, which in the two sets of wing-coverts make two light bars across the wing; the quills are dusky brown, very slightly edged with yellowish white; the tertials are more broadly margined; tail dusky brown; chin black; breast and flanks light yellowish brown, streaked mostly on the flanks with dusky; belly and under tail-coverts nearly white; legs, toes and claws brown. In spring the breast becomes a beautiful pink, which colour extends itself over the flanks and up the side of the neck nearly to the eye: as the spring advances this colour probably becomes brighter, as Yarrell calls it "vermilion," but the colour on the breast of my bird, killed in March, is by no means so bright as that, nor is it like any of the shades of colour on the breast of

the Common Linnet during its assumption of its spring attire.

The eggs are of a "pale bluish green ground colour, spotted with orange-brown, principally towards the larger end.*

BULLFINCH, *Pyrrhula vulgaris*. This very handsome, but it must be admitted somewhat mischievous, bird, though resident with us, is not very numerous, partially perhaps owing to its persecution by the gardeners, and partially to the more systematic attacks of the bird-catchers, the Bullfinch being much prized as a cage-bird.

As the food of this species consists, in a great measure, of buds, it is consequently very destructive both in the garden and in the orchard, where it eagerly devours the buds of the gooseberry, plum, cherry, apple, and, in fact, almost any fruit-bearing tree, not by any means limiting itself, as has often been suggested in its defence, to diseased buds, or those that have some grub or insect in them, but eating up the most healthy and likely to grow. Where the Bullfinches are not numerous perhaps the mischief thus done is not great—only a little necessary thinning. The buds of the larch and birch trees, as well as those of the white and black thorns, also fall a prey to this bird; on the other hand, it consumes a great quantity of the seeds of various weeds, such

* Yarrell, vol. i., pp. 542, 543.

as groundsel, thistle, plantain, dock and chick-weed ; berries and the seeds of the fir-tree* and black-berries† may also be added to the list of food.

In confinement the Bullfinch feeds upon canary and rape and hemp-seed : I believe too much of the latter is not good for it. It also shows an especial partiality for the seeds of all the weeds above-mentioned, and almost any other weed that can be given to it : if, however, a branch of an apple-tree or some other fruit-tree be given it, it very soon begins to work the buds.

The nest is usually placed in a thick bush or in the branches of a fir-tree, not very far above the ground : it is formed of small twigs, and lined with fibrous roots.

The adult male Bullfinch is a fine handsome bird. The beak is black ; the irides dark brown ; all round the base of the beak, the head and higher part of the nape are velvet-black ; back and scapulars bluish grey ; rump white ; tail-coverts black, glossed with blue ; lesser wing-coverts greyish, but darker than the back ; the greater wing-coverts black, glossed with blue and tipped with greyish white, making a conspicuous bar of that colour across the wing ; all the quills are black, but some of them, especially the tertials, are glossed with blue ; tail the same ; throat,

* Meyer, vol. iii. p. 159.

† 'Zoologist' for 1867 (Second Series, p. 685).

cheeks, ear-coverts, breast and belly a beautiful bright reddish pink: under tail-coverts white; legs, toes and claws purple-brown. The female differs in having all those parts which are pink in the male a dullish brown, and the grey on the back is a little mixed with the same colour on the margins of the feathers. The young birds are like the female, without the black head.

The eggs are a light bluish green ground colour, with dark purple and lilac spots on the larger end.

COMMON CROSSBILL, *Loxia curvirostra*. This very curious bird is a rare occasional visitant in these parts, making its appearance, however, when it does come, in large flocks: its stay is not generally of very long duration: the last appearance* here, as far as I know, was about thirty years ago, when many were shot in various parts of the county: two of these in my collection were shot close by here out of a flock that took up its abode in some fir-trees: before that, as long ago as the year 1791, Colonel Montagu records a great invasion of these birds in the neighbourhood of Bath; so great were their numbers on that occasion that one bird-catcher took as many as a hundred pairs in the months of June and July. Yarrell mentions several other years, especially 1836, 1837 and 1838, as great Crossbill years: it was in one of

* Several of these birds made their appearance near Taunton in December, 1868.

these years that mine were shot. The year 1866 appears to have been rather a great year; for although none, I believe, found their way to Somersetshire, their appearance in considerable numbers in various parts of England was noted in the 'Zoologist,' in Norfolk, Sussex, at Henley-upon-Thames, in the Isle of Wight and the Channel Islands. The earliest note of their appearance was of one seen by myself in the Island of Sark, near Guernsey, on the 25th of June: * on my return to Guernsey, a few days afterwards, three dead birds (two in red and one in green plumage) and one living were brought to me by a bird-catcher, who did not know what they were, but said that people were killing them in their gardens in great numbers: the live bird soon got very tame, and is now alive and flourishing in my aviary. †

From the general appearance of this bird in England it does not seem to be by any means a winter visitor, although its habitat is for the most part in latitudes to the north of this, but its visits are probably regulated by the supply of food, which consists principally of berries and seeds, especially the seeds of the different sorts of fir-trees, for which it diligently searches the cones, sometimes holding them in its foot like a parrot, which bird it resembles in many of its actions. The berries of

* The 'Zoologist' for 1866 (Second Series, p. 449).

† Since then killed by a hawk.

the mountain ash also appear to be a favourite food, as do the pips of the apple, from which circumstance it has obtained the name of "Shell-apple." In confinement it eats hemp and canary seed, also the seeds of various sorts of weeds and almost all seeds of berries: it is also very fond of biting sticks, even its perches, to pieces like a parrot.

Several instances of this bird breeding in England have been recorded. The nest is generally placed in a fir-tree, but occasionally an apple-tree is chosen: it is made of dry grass and twigs, and lined with hair. This bird is a very early breeder, the month of January having been mentioned by some.

In plumage the Crossbill varies very greatly, according to age and sex. The form of the beak is very peculiar, both mandibles being much curved at the point, so as completely to cross each other: the colour is a dull reddish brown, darkest at the tip; the irides are dark brown: in its red plumage (which appears to be almost the most common) the head, neck, rump, breast, flanks and most of the under parts are red; the back and scapulars are a darker shade, mixed with brown; wing-coverts and quills darkish brown; the greater wing-coverts are slightly tipped with dirty white; the tail is much the same colour as the wings. One of my red specimens has a few greenish orange feathers on the rump and flanks, also some dark brownish ones on the top of the head. One of those killed in Guernsey is pro-

bably assuming the orange plumage; it has the head, neck, back and scapulars a dull sort of olive-brown, much the same colour as a young Greenfinch; some of the feathers are more or less margined with green; the rump is orange and yellow, mixed; wings and tail like the red ones; breast and all the under parts dull olive-brown, tinged with yellow and green. The one I brought home from Guernsey alive was evidently a young bird, being much duller in plumage than the one just described, and having more green and less orange on the rump; nor did it show any orange tinge on the under parts: during the moult, which took place in the spring, its head and neck became very grey; it afterwards assumed very much the plumage of the orange bird above described: it is now (October) again becoming very grey about the head and neck; so probably a second moult is approaching. Yarrell describes the young females as having a greenish yellow tint on the top of the head, and the whole of the under surface of the body is mixed with greyish brown; the rump and upper tail-coverts primrose-yellow, tinged with green; the rest as in the male: he adds that, as far as he knows, no females have been found in the red plumage: this very probably may be so, but I do not think that either the different states of plumage or the habits of this very curious bird have yet been perfectly worked out.

“The eggs are white, sometimes tinged with blue or green; they are spotted, chiefly about the larger end, with violet and deep claret-red or brown.”*

This is the last of the Somersetshire Finches: there are, as I before observed, several more species included, on more or less good authority, as British, but I have not been able at present to find any authority for mentioning them in this list. As a whole the family is a most interesting one, and perhaps, both on account of the great numbers of some of the species and the variety of food which they all consume, the Finches are of more importance to the gardener and the agriculturist than any other family, the Corvidæ not even excepted; and for this reason I hope the attention of my readers and of ornithologists generally will be more particularly directed to the subject of food, and that we may be able to settle the much-vexed question, whether they are to any great degree our enemies or friends, or (which is more probable) a mixture of both: as far as I have been able to form an opinion, I certainly believe them to be our friends, the good they do predominating over the evil, and that, generally, most in those species which are most numerous.

* Meyer's 'British Birds,' vol. iii., p. 141.

Family STURNIDÆ.

The Sturnidæ include but three British species, two of which are very rare, and neither of these am I at present able to include amongst the birds of Somerset.

COMMON STARLING, *Sturnus vulgaris*. The third in the list, the species at present under consideration, is, however, exceedingly numerous, and seems to be increasing in numbers: perhaps it partly owes this increase to its immunity from the attacks of Hawks: the Kestrel, our most common Hawk, will not eat it; the Sparrowhawk will eat it, but it probably prefers any other bird.

The Starling is resident here all the year: at times it makes its appearance in immense flocks, consisting of many hundreds, even thousands, of birds: these large flocks make their appearance in our grass-fields and meadows, mostly in wet weather. The appearance of one of these flocks on the wing puts one in mind of a flock of Purres on the sea-coast, as they turn and wind about somewhat in the same manner: in fine dry weather they spread more over the country, and their numbers do not then appear so great: they all return, however, to the same place to roost, generally to some shrubbery or plantation of laurels or other evergreens. When great flocks collect in some place of this sort to

roost, they do considerable damage to the ever-greens, in consequence of the great quantity of guano deposited, which poisons the plants. In other ways the Starling is a most useful bird, feeding on grubs and insects. M. Prevost gives strong evidence of the usefulness of this bird in his list of food, which is as follows:—"January, worms, grubs of cockchaffers and grubs in dung; February, grubs, snails and slugs; March, grubs of cockchaffers and snails; April, the same; May, the same and grasshoppers; June, flies and grubs of various flies; July, grubs and fresh-water shell-fish; August, flies, glow-worms and various beetles;* September, green locusts, grubs of carrion-beetles and worms; October, worms and beetles; November, snails, slugs and grubs. In summer it adds fruit and in winter hips, haws and buds of trees." This list certainly gives the Starling a most excellent character for general usefulness to man by the destruction of noxious insects, and although fruit is added to the list I have never myself caught this bird stealing fruit or heard any abuse of it from the gardener; I have, however, seen it eating ivy berries.

* The gizzard of one I examined this August was filled with small brown beetles and a little grass that it had probably picked up with them; and in each of two others shot at Burnham, I found a small snail, the rest of the gizzards being filled with various parts of beetles.

There are many notes in the 'Zoologist,' all of which tend to prove the usefulness of the Starling, amongst which I may specially quote one by Mr. Cordeaux: he says that during a very dry summer Starlings collected in a field of vetches, and an old labourer remarked to him, "Them Starns are getting no end of them tares:" suspecting the same himself he shot two for examination, and on opening them found the stomach crammed with insects: there were several earwigs and some small bronze-winged beetles; the rest was a mass of a large green Aphis: he continues, "On examining the vetches, I found the stems literally crowded with this green nuisance, and these, with an occasional beetle, &c., appeared to be the entire food of the Starlings." The Starling is also very fond of feeding on ticks and other parasitical insects which are to be found in sheep's wool, and may often be seen enjoying a quiet ride on a sheep's back and at the same time getting a very good dinner.

The Starling has a very curious habit of soaring and wheeling about high in the air, so high as at times to be nearly out of sight, much after the manner of the Swift: this habit I have often noticed, but only on a fine clear day, and generally on such a day between two stormy ones, or else, but not so often, just before or after very bad weather: this habit has been noticed by many writers in the 'Zoologist;' but they all seem to be of opinion

that the Starlings are at such times hawking for flies: this I very much doubt, as this soaring always takes place at a time when their food is plenty and easily attainable on the ground; and accordingly many may be seen busily engaged in the search for food on the ground at the same time that others are soaring.

The nest of the Starling is generally placed in a hole in a wall, or under the thatch or tiles of a cottage, in some other building, or in an old ruin: when such places as these cannot be found a hole in a tree seems to suit equally well: it is made of twigs, straw, hay, dry grass and roots. The nest is generally placed rather deep in the hole, generally too much so for the hand to reach, and the hole through which the bird enters is generally too small for the hand. I think also the Starling prefers a place for its nest where it has two entrances, so that if stopped at the one it may escape from the not over-tender attentions of young birdnesters by a back door; at least this appears to be the case in my orchard, where many Starlings build every year, and all the holes selected are such as have two entrances, although many other holes apparently equally suitable may be found, but if they do not possess this convenience they are always neglected.

The Starling is very easily tamed, and is very amusing in confinement: it readily learns to whistle various tunes, and to a certain extent it may be

taught to speak ; but in this accomplishment it falls very far short of the Raven and the Jackdaw.

The Starling is a beautiful bird when seen close, in consequence of the glossy metallic tints with which its whole plumage is shot, though at a little distance it appears to be a dark, common-place looking bird enough. The beak is light yellow, the tip only being dark horn-colour, nearly black ; irides brown : the whole of the feathers, except the quills, tail and wing-coverts, are peculiarly shaped, being very narrow and pointed ; the head and neck are beautifully shot with glossy dark green and purple, with a small spot of light brown at the tip of each feather ; the colouring of all the upper parts is the same, but the feathers are larger and consequently the light brown tips are more conspicuous ; the greater wing-coverts have on the outer web the same metallic tints ; the inner webs are dusky ; the whole of the outer web and tip are margined with light brown ; quills and tail dusky, each feather narrowly margined with light brown ; the secondary and tertial quills are more broadly margined, and the outer webs slightly shot with green ; the neck, breast and belly have the same glossy metallic tints of purple and green, and each feather is tipped with white ; the feathers are of the same narrow-pointed shape ; very old birds have fewer of the white tips. I have one in my collection which has no white tips to the feathers of the neck and breast ; the under

wing-coverts are pale brown ; the under tail-coverts are the same colours as the rest of the under parts, but the feathers are rounder and rather broadly margined with white. Legs and toes dark reddish brown ; claws dark horn-colour. The young birds of the year have the irides light grey ; the beak dark horn-colour, the upper parts are then of a uniform dusky brown ; the throat is white and there is a tinge of white on the belly : the quill-feathers and tail are dusky brown, with pale yellowish brown edges. In this state of plumage the Starling has been mistaken for other species. About August the young birds begin to assume the more mature plumage, and then present a very curious and mottled appearance, the glossy feathers of maturity breaking out, as it were all over the body ; the head and neck seem to be the last parts to change. Varieties occasionally occur : one variety is described in the 'Zoo-logist' for 1865 as being of a beautiful cream-colour, with bright yellow margins to the feathers ; another as being a light grey ; and another is described as being of a chestnut-brown colour throughout : but white and cream-colour are the most common varieties.

The egg, which is rather large for the size of the bird, is a uniform pale light blue, without any spots or markings : in form it is rather long and slightly pear-shaped,

Family CORVIDÆ.

Somersetshire appears to claim all the nine species of Corvidæ at present included in the British list.

CHOUGH, *Fregilus graculus*. The present species appears to be almost or entirely extinct in this county: the well-known sign of the "Three Choughs" at Yeovil would perhaps lead one to suppose that these birds had at one time been common in that neighbourhood: they have certainly now ceased to exist there, and have I believe generally throughout the county,* except a few partially tame ones kept by Sir Alexander Hood at St. Audries. In the beginning of April in this year (1868) a pair of these birds made their appearance on Mr. Bisset's lawn at Bagborough, close by the Quantock Hills, and seemed disposed to build in the church-tower close by, as they were seen about there for three or four days: had they not unfortunately been shot they in all probability would have done so, more especially as there are no Jackdaws there to molest them, they having all been destroyed by the predecessor of the keeper who shot the Choughs.

* I have lately been informed that until a very few years ago these birds bred regularly on the cliffs near Minehead, but that one year their nests were destroyed by some masons who were employed about the harbour works, since which time the birds have never returned to their old quarters.

Soon after this occurrence a letter appeared in the Taunton papers from Sir Alexander Hood claiming these birds as escapes from his park, and saying that they had paired and strayed away from St. Audries, where he had for years kept a few, hoping they would breed, and thus this interesting and rare bird would again become naturalized on our coast. Whether these birds were really Sir Alexander's, or some driven from their own homes either by their enemies the Jackdaws or by some of their own species to seek a new nesting-place, may still appear doubtful; there was certainly no mark of domestication about them; their plumage was perfect: on the other hand, they were perhaps tamer than is usual with these birds, although I have seen them both at Lundy Island and in Guernsey, where they are plentiful, come about farm-houses and other buildings in search of food.

This bird is often called the "Cornish Chough," but there seems to be no particular reason for that name being given to it, as it is quite as common in many other counties, both in England and Wales, that suit its habits. Near this county it is to be found, as I before said, in Lundy Island and in both the neighbouring counties of Devon and Dorset, and, on the opposite coast of Wales, in Glamorganshire and in Pembrokeshire, in which latter county I have seen these birds in considerable numbers, and according to Yarrell one has been killed in the

neighbouring county of Wilts. Though generally living near the sea this bird is sometimes found inland in such places as suit its habits.

The Choughs seem to have a natural antipathy to the Jackdaws, who, being the hardier birds, are probably supplanting them. In Guernsey, where the Choughs are common, there are very few Jackdaws, only one here and there, and that perhaps only a straggler from the neighbouring islands of Jettoo and Herm, not more than about three miles off from land to land, and in these two Islands the Jackdaws are numerous and scarcely a Chough is to be seen : if the Jackdaws, as they probably will, attain in time to greater numbers than these two little islands can support, they will probably emigrate to Guernsey, and an interesting struggle for existence will then take place.

The Chough is said to feed upon insects, berries and grain. Yarrell says it is seldom seen searching for them in the open fields. I have, however, in Guernsey seen them feeding in the fields like Rooks, and Yarrell adds that they may often be seen following the plough to obtain the grubs and insects that are thus exposed. The gizzard of one of these shot at Bagborough contained a few oats, some grubs, and some half-digested brown skins which I think were those of earwigs.

The nest is generally placed in crevices amongst rocks, in high cliffs, and in old castles and church-

towers: it is made of sticks, and lined with wool and hair.

The Chough is certainly a much handsomer bird than the Jackdaw, from which it may immediately be distinguished by its beak and legs. The beak is sealing-wax red; the irides are of two colours, the inner ring being red and the outer blue; the eyelids are red; the whole of the plumage is a beautiful glossy black, shot with purple; the legs and toes sealing-wax red; claws black. The young birds of the year are not quite so glossy in their plumage, neither are the beak and legs quite so bright.

The eggs of the Chough are not unlike some specimens of those of the Jackdaw; they are of a yellowish white ground, fading in cabinet specimens to white, spotted with dusky ash-grey and light brown.

RAVEN, *Corvus corax*. The Raven is resident with us all the year, but, owing to the ravages of gamekeepers and others, it is now growing very scarce; a few, however, may still be seen on the Quantock and Brendon Hills, and I believe there are a few pairs on the Mendips: there is also, in the 'Zoologist' for 1866, a notice of the death of a very patriarchal Raven, one of a pair that lived and bred for many years on Brean Down, near Weston-super-Mare: the Rev. Murray A. Mathew, who noticed the death of this bird, said it was the largest and probably the oldest Raven he had ever seen.

This fine bird is unfortunately a most mischievous fellow, and that to more people than the gamekeeper, for lambs and even sheep often fall a prey to him. In the Shetland Islands, where Ravens are very numerous, even colts and ponies are often killed by them; the eye seems to be invariably the first place attacked. The destructive propensities of the Raven may be judged of from the following note in the 'Zoologist,' from the pen of Dr. Saxby, who, writing from Shetland, says as soon as the young Ravens require a supply of food, the parents become excessively mischievous: "No uncovered egg will then be safe, and ducks, hens, lambs and foals will be mercilessly slaughtered. Even full-grown ponies will not be secure if they exhibit any signs of weakness. The first attack is always made upon one eye, and then, as the tortured animal endeavours to alleviate the agony by rubbing the wound upon the ground, the other eye is pierced and the cruel bird flies off only to return when its victim is dead. A pony struggling to extricate itself from a peat-bog is almost certain to be destroyed by Ravens if it remain long unaided." Besides what has been already mentioned, the food of the Raven consists of small animals, birds, reptiles, insects, grain, dead fish and carrion.

With such destructive propensities as these, it is not to be wondered at that the Raven should be persecuted, and that in thickly inhabited and highly-

farmed and preserved counties it should be rapidly becoming extinct.

The nest of the Raven is usually placed in some inaccessible cliff, and, if possible, a place is picked out which has an overhanging rock above, so that the eggs or young may not be destroyed by stones or other things thrown down upon them. Where cliffs and high rocks are not to be found the Raven builds its nest in high trees. The nest is made of sticks, with a lining of wool and hair.*

The Raven is easily kept in confinement, and becomes very tame and amusing: it may also be taught to imitate the human voice, and this it does with considerable success, in some cases nearly equalling the Parrot. Amongst the British birds this power of imitating the human voice seems to be confined to the Starling and the present family of Corvidæ, many of which have this power as well as the Raven.

The Raven is a grand, powerful bird: the beak is black; irides brown and grey; the whole plumage is black, glossed with blue; the feathers on the neck and throat are long and pointed and more glossy than any of the rest of the feathers; legs, toes and claws shining black.

The egg of the Raven is much like that of the Crow or the Rook, but larger of course; Yarrell

* Yarrell, vol. ii., p. 67.

says two inches in length by one inch four lines in breadth : of a pale green colour, spotted and speckled with darker greenish brown.

CROW, *Corvus corone*. The "Carrion Crow," as it is sometimes called, is almost a miniature Raven, and its propensities are quite as mischievous, but not possessing the great strength and size of its big brother it is not able to accomplish so much harm ; sheep and lambs, however, occasionally fall victims to it : young hares, rabbits, ducks, chickens and game birds, and sometimes full-grown ones (especially if they are rather weakly), form part of its prey, as do the eggs of almost every bird, worms, insects and occasionally fruit and grain. On the sea-shore the Crow picks up a living upon dead fish and what it can get out of the various shell-fish it may find, but in all places the favourite food of this bird is carrion, no matter how stale or putrid. In spite of all delinquencies, and the consequent attack of game-keepers and farmers, the "knaveish crow" is still tolerably common throughout the county, and is resident all the year.

The nest is usually in the fork of a high tree, and placed high up : it is made of sticks, and lined with wool and hair.

The Crow is so similar in every respect, except size, to the Raven that no description appears to be necessary.

The egg of the Crow is also much like that of

the Raven, but it is naturally smaller; the ground colour is greenish, spotted with ash-colour and brown.

HOODED CROW, *Corvus Cornix*. The Hooded Crow, or as it is perhaps more commonly called, the "Royston Crow," is a rare occasional winter visitor in this county. I have seen one or two in the flesh at Mrs. Turle's that had been killed in the county, and Mr. Bidgood has one in his collection which was also killed in the county. In most of the midland and eastern counties this bird is much more common: I have often seen considerable flocks of them between Cambridge and Royston, from which latter place it takes one of its names. In Scotland and some of the northern counties they remain to breed, and have been known to do so as far south as Norfolk.

The food of the Hooded Crow seems to be very varied: one of the writers in the 'Zoologist' says it includes everything from sprats to sheep. According to Yarrell, lambs, eggs and poultry form part of the food, and when on the coast, fish, sand-worms, crabs and other shell-fish may be added to the list; corn and other vegetable productions are only resorted to in case of necessity. The same author adds that a pair of these birds have been seen to chase, knock down and devour a small Sandpiper.

The nest of the Hooded Crow is placed either in trees or in rocks, according to the nature of the

country in which the bird finds itself in the breeding-season: it is made of sticks and straw, and lined with wool and hair.

The Hooded Crow has the beak black and strong; irides dark brown; head, cheeks, throat and neck in front shining bluish black; wings and tail the same; nape of the neck, back, rump and all the under surface smoke-grey; the shafts of the feathers dark slate-grey;* legs, toes and claws shining black. Varieties of this bird occasionally occur, and it is said also sometimes to cross with the Carrion Crow.

The egg is mottled all over with greenish brown on a light green ground: it is rather smaller than that of the Carrion Crow.

Rook, *Corvus frugilegus*. The Rook, as everyone knows, is one of our commonest birds, and may be seen in large flocks in all parts of the county at any time of the year: it is so numerous throughout England generally, and is so diligent in search of its food in all the cultivated lands, that the benefit or damage done by this bird to the agriculturist has formed the subject of much dispute, and a good deal has been written on both sides of the question. The truth is, after all, that the Rook does both good and harm, and must, like most other birds, be judged by the preponderance of one over the other:

* Yarrell, vol. ii., p. 93.

I shall, therefore, lay as much evidence as I can before my readers, and leave them to form their own judgment, my opinion being that the Rook is of the greatest possible benefit to the farmer and that he may well say:—

“Dat veniam Corvis vexat sensura Columbas.”

As to the Pigeons, we shall come to them in due time, but now for the Rooks, and I will begin with M. Prevost's list of food, which is as follows:—“January, field-mice and grubs of cockchaffers: February, the same and red worms; March, larvæ and chrysalids: April, slugs, worms and chrysalids; May, beetles, larvæ, prawns and wire-worms; June, cockchaffers, eggs of birds and wood-boring beetles; July, young birds, beetles, &c.; August, birds, field-mice, weevils, grasshoppers, crickets, &c.; September, grubs and worms; October, grasshoppers, ground beetles and young animals; November, young rabbits, different insects and grubs; December, different animals and decaying substances.”

This list of M. Prevost's and a note of my own, in the ‘Zoologist’ for 1864, led to a good deal of discussion on the subject of the food of the Rook. My note was as follows:—“As to young rabbits I can quite bear out the assertion of M. Prevost, for in the spring of 1862 I saw and watched for some time a Rook busily engaged in feeding on something close by a hedge: so busy was he that he let me

approach quite close before he flew away and joined a flock of his companions in the next field, so that I am quite sure of the fact that the bird was a Rook and not a Crow. On going up to see what the Rook had been feeding on, I found a young rabbit quite warm and only just dead, but with part of the entrails eaten. I cannot of course say that the Rook actually killed the rabbit, but I think it extremely probable, as the rabbit had been so recently killed when I came up and drove the Rook away. We may add sand-eels to the list of articles forming the food of the Rook, as I have frequently seen them at Teignmouth feeding with the Gulls on sand-eels, especially just after the seine had been drawn for these fish. Walnuts I know, to my cost, form a large part of the food of the Rook during the months of September and October."

Since writing the above note I have been able to confirm my assertion that the Rook eats sand-eels, as I have often since then seen Rooks feeding on sand-eels and sprats, and having sharp contentions with the Gulls for them, and the Rooks generally having the best of the fight. I have also since then seen Rooks feeding on dead lamb and on horse-flesh, and convicted them more than once of stealing both young Wild Ducks and eggs; the last occasion was on a Sunday, so I could not shoot the Rook in the act: on another occasion they destroyed so many of my Wild Duck's eggs that at last I was obliged to

shoot one of the delinquent Rooks and hang it up over the nest that had suffered most; not that I am much in favour of shooting Rooks on any slight provocation, but in this instance an example seemed to be necessary, and the effect was certainly good.

The Rooks I find also constant attendants when I feed my tame Gulls, and they never miss an opportunity of pouncing down from some neighbouring tree upon anything they take a fancy to, and their fancy seems to extend nearly to anything, from a piece of bread or potato to a half-picked leg of a rabbit or chicken, or even a bit of cold mutton fat.

From the correspondence which I before said arose in the 'Zoologist' on the food of the Rook I have made out the following somewhat varied list of articles of consumption:—Carrion, anything from a dead rat to a sheep or a horse; young rabbits, birds and field-mice; eggs of game and ducks, also those of small birds, the Missel Thrush being specially mentioned (rooks are certainly more destructive to eggs in very dry than in moist damp weather, when other food is plentiful and easily attainable); cock-chaffers, numerous sorts of insects and larvæ; worms, grubs and wire-worms; apples, pears, walnuts, seed-corn, ripe corn; potatoes, both newly planted and young, and couch grass. I will wind up this notice of the food of the Rook with the following quotation from the 'Field,' which certainly goes a long way to prove the usefulness of the Rook, and

to show how mischievous would be a general persecution ending in the destruction of this bird:—"In one locality in an eastern county a large rookery was destroyed under the belief of the farmers that its inhabitants were hostile to their interests and consumed a large quantity of corn. But mark the result. Two years passed away, and the farmers congratulated themselves on being rid of their winged foes, little thinking that they had other foes in their place whose approach was more difficult to detect. In the second year many fields of wheat suffered from wire-worm, but in the third their ravages had become so general throughout the district as to occasion serious alarm. Little could be done to suppress their numbers until the Rooks were again thought of, and the evil was traced to its true cause. The rookery was permitted to be re-established by the return of many who had escaped the massacre, and who still cherished a partiality for their native trees, but who had hitherto been continually driven off. Their rapidly increasing numbers soon reduced the insect pest, leading the farmers to acknowledge the error into which they had fallen, and henceforth to look upon the Rook as a friend instead of an enemy."

The young Rooks appear to be fed mostly with insects: the gizzard of one I examined contained hard skins of insects and legs and wings of beetles; it also contained a considerable number of stones,

some of them as large as good-sized peas: as this bird was not able to fly the old birds must have brought it the stones as well as the rest of the food, knowing that these were necessary to assist the gizzard in the process of digestion.

The Rook, like many of the Corvidæ, is a very early breeder, and may be seen in February, and even as early as the end of January if the weather be mild, beginning to repair its old nests: at this time there is always a good deal of excitement in the rookery and much fighting. It is a very amusing sight at the pairing time to watch the Rooks courting, the male at that time feeding the female and playing round her in a most grotesque manner, and even making an attempt at singing. Occasionally second broods are produced as late in the year as November; several instances of this are given by Yarrell, and one in the 'Zoologist' for 1864.

The nest is usually placed in a high tree, and many are congregated in the branches of the same or closely adjoining trees: the nest is made of twigs and lined with a little grass and roots.

Many people are much in the habit of judging the probable state of the weather from the flight of Rooks, especially predicting wet and stormy weather from their soaring in the air and suddenly dropping from a great height nearly to the ground, as if shot.

“ Behold the Rooks how odd their flight,
They imitate the gliding kite,
And seem precipitate to fall,
As if they felt the piercing ball.”

The Rook is almost too well-known to need any description : the irides are dark brown ; the whole of the plumage is glossy, shining black, reflecting purple and blue ; it is much more glossy than that of the Crow. The space round the beak nearly to the eyes is a rough whitish skin without feathers ; this at a distance is one of the most easily seen distinctions between the Rook and the Crow. In young birds of the year this rough white skin round the beak does not appear, that part being covered with feathers, which are not replaced after the first moult. There is a very common theory, with which I do not myself agree, that the feathers are worn off by the bird rubbing them when boring in the ground for grubs and insects : if this were really the case the feathers would be replaced after each moult, and consequently for a short period at that time of year all Rooks would have this part feathered ; but this is not the case.

Varieties of the Rook not unfrequently occur ; the most general are pied black and white, white and cream-colour. I have one specimen of the pied variety in my collection, a young bird of the year : a part of the beak of this bird is white also.

The egg is much like that of the Crow, but rather

smaller, and not quite so bright coloured; the ground is a lightish green, and it is much blotched with two shades of brown, one a dark dusky shade, the other a lighter greyish brown.

JACKDAW, *Corvus monedula*. This somewhat mischievous but amusing bird is resident and common throughout the county. It adapts itself with considerable readiness to the locality in which it happens to find itself, taking to cliffs on the coast, cathedrals, church-towers and other high buildings inland, and in default of these to high trees.

The food of the Jackdaw is various, but, except in the matter of eggs of all sorts, of which this bird is a notorious thief, I do not know that it does much mischief in its search for food, which seems, besides eggs, to consist of a great variety of things, such as carrion, insects of various kinds, seeds or grain, beetles and grubs from cow-dung. Like the Starling it may occasionally be seen taking a ride on the back of a sheep or cow and picking out the parasitic insects; it also visits, but not often, the garden, to pick up a little fruit or vegetables. I find it nearly as constant an attendant when I feed my Gulls as the Rooks; and it is very amusing to see how, when one of the Gulls has got a tit-bit to which a little Jackdaw takes a liking, the Jackdaw will walk and hop about close to the Gull until at last it is provoked to fly at it: of this assault the Jackdaw immediately takes advantage to fly off with the tit-bit which the Gull has

dropped. When located on the sea-shore the Jackdaw picks up a living upon shell-fish, sand-eels, and the remains of other fish and Crustacea: it also commits considerable depredations upon the eggs of the different sea-fowl who have the misfortune to lay near its habitation.

The nest of the Jackdaw is placed in a variety of situations: on the sea-shore it is generally placed in holes or crevices of cliffs, from whence it emerges and robs the poor Razorbills, Guillemots, Gulls, &c.; inland it generally finds a convenient situation for its nest in the ornamental niches, figures or tracery work of cathedrals and other buildings; even the steps up to a church-tower, if not much used, are often made nearly impassable by the rubbish collected there by the Jackdaws for their nests: in collecting all this material this bird often does considerable mischief, as it steals anything it can lay its hands, or rather its beak, upon. One rather curious instance is mentioned by Yarrell, who says that the Jackdaws who built in the neighbouring church-towers stole all the pegs on which the names of the plants in the Botanic Gardens at Cambridge were written, thus causing considerable difficulty in afterwards identifying some of the plants. In confinement the Jackdaw is a most impudent and amusing bird, always hopping about and looking out for some mischief to do.

“ In and out
Through the motley rout,
That little Jackdaw kept hopping about
Here and there
Like a dog in a fair.”

It may be taught to imitate the human voice, which it does with considerable success.

In plumage the Jackdaw somewhat resembles most of the other of the Corvidæ hitherto noticed. The irides are greyish white, which gives it a very roguish and knowing look; the beak is black; the top of the head black; the back of the head and neck grey: the whole of the rest of the plumage is black, but not quite so glossy as that of the Rook: legs, toes and claws shining black. Varieties of this bird occasionally occur, the most general being white or pied.

The egg of the Jackdaw is considerably smaller than that of the Rook, and is much more distinctly marked; the ground colour is a light greenish blue, very distinctly spotted with black: the spots vary considerably in size and number.

MAGPIE, *Pica caudata*. This very beautiful, but somewhat mischievous, bird is resident with us throughout the year and is still tolerably common all over the country, although it is persecuted by gamekeepers with more than ordinary pertinacity, on account of its egg-stealing propensities, to which it adds the still graver crime of killing young birds

and rabbits. M. Prevost gives the Magpie rather a good character for general usefulness, and certainly, as far as his list of food goes, this bird ought not to be very virulently persecuted. The list is as follows:—"January, grubs of cockchaffers, beetles and different corn and seeds; February, the same and berries; March, the same; April, moles, crickets, water-rats and field-mice; May, cockchaffers, glow-worms and fruit; June, the same and weevils; July, beetles and field-mice; August, bird's eggs and weevils; September, beetles, worms, barley and grasshoppers; October, grasshoppers, carrion beetles and green locusts; November, grasshoppers and kernels of fruit; December, grubs, cockchaffers, young rabbits and berries." That this generally good character of the Magpie is to a certain extent deserved may be proved by a note in the 'Zoo-logist' for 1864, in which mention is made of one bird that had been killed by that odious and most mischievous device of poisoned wheat, and in the crop of this bird were found seven grains of the poisoned wheat, nine wire-worms, and about a table spoonful of beetles of various sizes and larvæ. The gizzard of one I examined in October contained one small snail whole and shells of others, a great number of beetles, one grain of barley, and a great quantity of seeds of various weeds, mostly charlinch.*

* Charlinch or cherlock, *Sinapis arvensis*.

But in spite of all this I am afraid it must be admitted that the Magpie does commit considerable depredations upon young animals, birds and their eggs. Montagu has very little to say in its defence: he says, "No animal food comes amiss to its carnivorous appetite; young poultry, eggs, young lambs and even weakly sheep it will attempt to destroy by first plucking out their eyes; the young of hares, rabbits and feathered game share the same fate; fish, carrion, insects and fruit, and lastly grain when nothing else can be got." There is no great wonder that a bird against which so much can be said, and that with considerable truth, should suffer a great deal of persecution, and, as far as the gun goes, perhaps much mischief is not done; but to call in the aid of poison, either by poisoning wheat or any other substance, for the destruction of even the most mischievously disposed bird, does appear to be a very dangerous and pernicious custom, and liable to lead to much more destruction than was ever intended or contemplated. In this county, at all events in this part of it, I am glad to say this practice has never been much in use.

The Magpie is rather an early nester: the nest is usually placed in a high tree, but this rule is not invariable, as a low bush, an apple tree in an orchard, or even a hedge-row, is occasionally chosen. The nest is made of sticks, strongly woven together and plastered inside with clay. There is an instance on

record of a Magpie's nest with young birds in it having been placed in a cage in a room, and the window left open, the parent birds sufficiently overcame their usual wariness of disposition to enter the room and feed their young.*

The Magpie is easily tamed, and is a most amusing bird in confinement, imitating the human voice, with some success, like the Jackdaw: like that bird, too, it has a most felonious disposition, and steals nearly anything it can come across.

This is really one of our most beautiful birds, and by no means the merely black and white bird which is usually supposed. The beak is black; the irides hazel; the head, neck, back, throat and breast are black; the scapulars white; wing-coverts and tertials black, beautifully glossed with blue; the quills are black or dark green, according to the light on the outer web and at the tip and base of the inner web, the rest of the feather white; the rump is greyish; the tail-coverts black; the tail is a beautiful greenish bronze, occasionally reflecting purple; belly and flanks white; thighs dullish black; under tail-coverts black; legs, toes and claws black. Varieties of the Magpie occasionally occur: one variety with a yellow beak gave rise to considerable discussion in the 'Zoologist' for 1867 and 1868; two specimens of this variety had been seen, one in Devonshire and

* 'Zoologist' for 1864, p. 8885.

one in the North, and the question arose whether this was a mere variety of our own common Magpie or an accidental straggler from America, where there is a species of Magpie (*Pica Nuttali*) which resembles our own in every way except in the peculiarity of the beak, which in the American species is bright yellow: of course there was a chance of either or both of these birds having been brought over as pets in some vessel and escaped: there was another supposition, namely, that these two birds had been sucking eggs and that the beak was coloured with the yelk; but this seems scarcely possible, as enough of the yelk would not have stuck on the beak to colour it so completely as seems to have been the case, or indeed to colour it at all: my own opinion is that these yellow-beaked Magpies were mere varieties of our Common Magpie, and I do not think it very extraordinary that they should have varied in the direction of so nearly related a species.

The eggs of the Magpie have a dull whitish green ground, much speckled with dull lightish brown; but they vary both in the shade of the ground colour and of the spots, as well as in size.

JAY, *Garrulus glandarius*. In spite of the many enemies which combine against it, the Jay is still tolerably common throughout the county, and is resident all the year: it suffers, however, severely from the perhaps not quite unmerited attacks of the

gardener and the gamekeeper; ladies and fishing-tackle makers also join in the persecution of this bird, the one keeping the wings for ornaments for their hats, and the other the blue feathers of the same parts for flies.

The food of the Jay is very various, and consequently M. Prevost's list, for this one of his birds, is rather a long one:—"January, grubs of cockchaffers, acorns and berries; February, chrysalids and different grains and seeds; March, grubs, insects, wheat and barley; April, grubs, beetles and snails; May, cockchaffers and locusts; June, eggs of birds, cockchaffers and beetles; July, young birds, flies and beetles; August, the same, acorns, grubs and dragon-flies; September, the same and fruits; October, beetles, slugs, snails and grain; November, the same; December, the same, haws and hips." Though not quite innocent, this list does not make the Jay by any means one of the most guilty of birds. There can be no doubt, however, that it has a good deal to answer for, especially in the matter of peas, cherries and eggs. Mice and frogs seem occasionally, by way of variety, to form part of the food of the Jay: for the frogs I can find no authority, except Meyer; he includes them in his list of this bird's food.

The nest of the Jay is usually placed in thickish bushes or low trees: it is made of sticks and lined with roots and grass.

The Jay is easily tamed, and is a very amusing bird in confinement, on account of the power it possesses of imitating various sounds, the human voice amongst others. In its wild state the Jay exercises this power of imitation to a very great extent: Montagu even goes so far as to say it imitates "the bleating of a lamb, the mewing of a cat, the note of a Kite or Buzzard, the hooting of an Owl, and even the neighing of a horse: these imitations are so exact, even in a natural wild state, that we have frequently been deceived."* It also imitates the song of various small birds; in fact, it is quite a mocking bird.

In plumage the Jay is a very beautiful and conspicuous bird. The beak is dark horn, almost black; irides pale blue; forehead and top of the head dull dirty white, inclining to reddish fawn-colour on the top of the head; in the centre of each feather is a narrow streak of black, which gets broader at the top; the feathers of these parts are considerably elongated, forming a crest, which can be elevated at the pleasure of the bird; back and scapulars reddish fawn-colour, with a tinge of blue in it; lesser wing-coverts the same, but some of them are a shade redder; the greater wing-coverts are a beautiful bright blue, shaded in streaks from almost white to blue-black; primary quills dusky, edged with dull

* Montagu's Dictionary, by Newman.

white; secondaries black, glossed with blue on the inner web, and on the outer web also for about an inch at the tip; the rest of the outer web is white; tertials black, glossed with blue, except a few nearest to the body, which are a rich chesnut; rump and tail-coverts white; tail black, the lower part of the two central feathers is rather indistinctly barred with blue; a black moustache extends from the base of the beak under the eye towards the neck on each side; throat dirty white; breast and belly nearly the same as the back, but rather lighter; under tail-coverts and thighs nearly white; legs, toes and claws pale brown.

The egg of the Jay is a dull-coloured egg, very thick and round at the broader end: the ground colour is a pale dull green, which is very thickly speckled with pale brown.

NUTCRACKER, *Nucifraga caryocatactes*. I include this extremely rare bird in the Somersetshire list on the authority of Montagu, who gives the following account of one having been seen near Bridgwater:—"Mr. Anstice assures us he saw one of this rare species near Bridgwater, upon a Scotch fir, in the autumn of 1805. This accurate observer of Nature could not be deceived, as he examined the bird and attended to its actions for some time with the aid of a pocket telescope."* Since this, two

* Montagu's Dictionary, by Newman.

other specimens have been shot in the neighbouring county of Devon, and a few others in various parts of England; but I can find no other record of a Somersetshire specimen. There is a specimen of this bird in the collection of the late Mr. Popham, of Bagborough, now Mr. Bisset's, but no one knows anything about it.

The food of the Nutcracker is said to consist of insects, seeds of pines, beech-masts and nuts, which it is said to crack by hammering with its beak like the Nuthatch.

The nest is placed in a hole in a tree, either excavated entirely or enlarged by the bird itself.

The Nutcracker is rather an obscure and dull-coloured bird in plumage, which may have caused it occasionally to be overlooked. "The beak is black; the lore, or space between the beak and the eye, dull white; irides brown; top of the head umber-brown, without spots; the sides of the head, the scapulars, the whole of the back, the lesser wing-coverts, and all the under surface of the body, clove-brown, each feather terminating with an elongated triangular spot of dull white; the greater wing-coverts and the wings blackish brown, the ends of the feathers rather lighter in colour than the other parts; the rump uniform clove-brown, without spots; upper tail-coverts blackish brown; the middle pair of the twelve tail-feathers also blackish brown, without any white; the next tail-feather on each side has a narrow

white tip; the white colour occupies more space in each feather approaching the outside, increasing to a space of three-quarters of an inch at the ends of those most external; the under tail-coverts and under-surface of the tail-feathers greyish brown, the latter ending in dull white; tail in form nearly square at the end; legs, toes and claws black." As I have not a Nutcracker in my collection, and I do not think I am likely to get one, I have taken the above description from Yarrell. In size this bird nearly equals the Jay: from the stuffed specimens I have seen I should say it was rather smaller, but Yarrell gives the dimensions as nearly the same, the length of both being thirteen inches and three-quarters.

This bird concludes the Corvidæ, as well as the rather large division of the Insessores, or perching birds, called Conirostres. It is one of the most interesting of the various divisions of this large order, as it is the one most intimately connected with man, and from the number of individuals in some of the species, as well as from their propensities, the one which may be supposed to do him most good or harm: I have therefore been as minute and particular as I can in my notes of the food of the various species. I think if any one examines the various lists of food I have given, he will find that neither the farmer nor the gardener is likely to gain much by a

general persecution and massacre of the birds included in this division, and certainly no case can be proved against them to justify their wholesale destruction by means of poisoned grain. My own belief is that were such a destruction accomplished, the loss produced by it would give both the farmer and the gardener a very good reason for any amount of grumbling.

SCANSORES.—*Family* PICIDÆ.

The various species included in the division of the great Insessorial order which now claims our attention, the Scansores, or climbing birds, differ much both in habits and formation from any of the species yet noticed. In the family which is generally placed first amongst the Scansores, the Picidæ or Woodpeckers, the difference of formation is very considerable: the feet of all the British species belonging to this family have two toes before and two behind, the outside toe on each foot being reversed and turned backwards, which gives these birds great facility in their usual occupation of climbing the stems and branches of trees: they are also assisted in this by the formation of the breast-bone, the keel or upright portion of which is extremely narrow: this entails a certain loss in the power of flight, but is of great use in enabling the bird to keep an upright position against the stem of

a tree, which a deep keel would interfere with. The tail also is of considerable service to them, the middle feathers of which, in all the Picidæ except the Wryneck, are very stiff and strong and pointed at the end: on these feathers the bird is in the habit of resting, when, in the course of its search for food on the upright stem of a tree, it finds it necessary to throw its head much back. The tongue is another great peculiarity of the Woodpecker family, as it is capable of being thrust forward to a considerable distance beyond the end of the beak: the tip of the tongue is covered with a glutinous substance secreted by the bird; by this means it is able to capture small insects amongst the bark of trees, which it would not be able to reach with its beak, but shooting out its long tongue it reaches these small insects, which, sticking to the glutinous substance, become the prey of the bird. The narrow keel of the Woodpeckers, as I said before, considerably curtails their power of flight; consequently these birds seldom attempt a longer flight than from one tree to another in a well-wooded district. Should a Woodpecker be approached when engaged in climbing a tree it seldom seeks safety in flight, but dodges behind the stem or branch which it may be on, and thus keeps itself out of sight. The British Woodpeckers are now said to include nine species besides the Wryneck; but of these nine it is very doubtful if one, the Black Woodpecker, has ever been obtained

in Britain, and three of the others have only been obtained once each.

GREEN WOODPECKER, *Picus viridis*. The Green Woodpecker, or "Woodwall," as it is often called, is resident with us all the year, and is not at all an uncommon bird in all parts of the county: its wild laughing cry may often be heard, and is a much more certain indication of the presence of one of these birds than the well-known "Woodpecker tapping the hollow beech tree," which tapping noise, though occasionally caused by a Woodpecker, especially the Lesser Spotted, is much more generally made by a Nuthatch hammering away at a refractory nut.

The food of the Green Woodpecker consists mostly of the different insects which can be found hid under the moss or the bark of trees, especially where the bark is a little loose or rotten. The bird generally begins its search for these insects at or near the bottom of a tree, and gradually works its way upward and round and round, but never downwards. It is by no means limited in its choice of food to such insects as may be found in trees, but it may quite as frequently be seen on the ground searching for grubs and worms, especially for ants and their eggs which form a very favourite portion of its food. This is the last of M. Prevost's birds which I shall have to quote: his list of food is

as follows ;—“January, ants ; February, worms and grubs of ants ; March, slugs, beetles and grubs of ants ; April, ants and worms ; May, red ants and grubs of wasps ; June, bees and ants ; July, red ants ; August, red ants and worms ; September, ants and worms ; October, grubs of ants ; November, grubs of ants and bees ; December, ants.” This bird seems occasionally to vary its food, as oats and the remains of acorns have been found in its stomach.*

The eggs of the Green Woodpecker—this species is said to make no nest—are always placed in a hole in a tree, which the bird excavates either partly or entirely for itself: on this account it has often been accused of doing much mischief to trees, but this accusation appears to be wrong, as the tree chosen is always one the interior of which is already more or less decayed, although it may show no signs of this outwardly. Mr. Hewitson, in his “Notes on the Ornithology of Norway,” published in the ‘Magazine of Zoology and Botany,’ says, “Of the Green Woodpecker we saw several near one of the churches, in the steeple of which (being of wood) they had bored several holes in which to deposit their eggs.” So it appears that it is not to living wood only that the Green Woodpecker resorts for nesting purposes. Yarrell says he has known

* ‘Zoologist’ for 1865, p. 9468.

the young of this bird taken from the tree before they can fly and brought up by hand.

The Green Woodpecker is a fine handsome bird, nearly equalling in brightness of colouring many foreign birds. The beak is a dark shining horn-colour; irides white; the lower part of the forehead, the space from the beak to the eye, and round the eye, black; a moustache descends from the base of the beak a short way down the sides of the neck,—black in the female,—crimson in the male, edged with black; top of the head and nape crimson; back and scapulars bright green, tinged with olive; rump and tail-coverts bright greenish yellow; both sets of wing-coverts olive-green: primary quills dusky, barred on the outer web with dull dirty white; secondaries and tertials olive-green, tertials rather the darkest, and some of them barred on the inner web with dull brown; the tail-feathers are very strong, stiff and pointed at the ends, dusky barred with dull light brown; throat, hinder part of the cheeks and the neck, dull dirty white, tinged with green; all the rest of the under parts the same, but rather darker in colour than the throat. Young birds that have recently quitted the nest have the crimson colour on the top of the head mixed with yellow and greyish black, the feathers passing, by a change of colour, from greyish white to yellow, and afterwards to crimson. On the moustache of the young male the same changes may be observed: on

the back and wings the green feathers are tipped with yellow, all the under surface much the same as the adult, but streaked longitudinally on the neck, and transversely on the breast and belly, with greyish black.* The green colour on the under surface increases with age. There seems to be an occasional variety in the plumage of this bird: the tips of the wings for about two inches down each feather, and nearly the whole of the tail-feathers, being of a rusty brown colour.†

The eggs are a pure shining white, much about the size of those of the Missel Thrush.

GREATER SPOTTED WOODPECKER, *Picus major*. This bird is by no means so common as the last-mentioned species, and is considerably more local in distribution: it is resident throughout the year. In habits and manners, as well as in food, it somewhat resembles the Green Woodpecker, except that it does not resort so much to the ground in search of ants, grubs and worms, but confines itself more to the various grubs and insects to be found about and under the bark of trees: it, however, varies its food a little by occasionally taking grain, nuts and the seed of the pine. Like the last species it places its eggs in a hole in a tree, without any nest: like it, too, it is a moderately early nester, the young birds

* Yarrell, vol. ii., p. 152.

† 'Zoologist' for 1867 (Second Series, p. 950).

being fledged and able to take care of themselves by the middle of July. Yarrell says he once saw some young ones kept in confinement by one of the keepers at Kensington Gardens, in which place these birds are rather frequently to be found: they were climbing all about the inside of their cage, which was hung against a large tree near the lodge.

In plumage the Greater Spotted Woodpecker is a very handsome bird, conspicuous from the very decided contrast of colour which it presents. The following description is taken from a bird shot in Combe Wood, near here, in April, and kindly presented to me by Mr. Winter the day it was shot. The beak is dark horn-colour, bluish grey (inclining to white) on the under part of the lower mandible; irides red; forehead, just over the beak, and space under the eyes, and a narrow streak over it and the ear-coverts, white; head black; in the adult male there is a band of crimson at the back of the neck; there is a streak of black from the base of the beak, under the ear-coverts, down the side of the neck to the breast, and from it a streak of black behind the ear-coverts, which, as well as the back of the neck, are black, except one well-defined spot of white on each side; the back, rump and tail-coverts are black; the scapulars, some of the greater coverts of the tertials, white; the lesser wing-coverts and all the rest of the greater-coverts black; primary quills black, brownish towards the tips, with several well-

defined spots of white on the outer webs ; all the rest of the quills are black, spotted with white on both webs ; the feathers of the tail are very strong and pointed, except the two outer on each side, which are rounded at the top ; the four middle feathers are black, the two next are tipped with white, with a spot of black in it, and all the rest are white towards the tips, spotted with black, and black at the base ; the throat is white ; all the rest of the under parts dirty white, except the vent and under tail-coverts, which are red ; legs and toes dusky grey ; claws black. Yarrell says the young birds of the year “ do not differ from the adult, except in having the whole of the top of the head red, not so bright as the red patch at the back of the neck of the old male, nor so pure, having a few black feathers mixed with it.

The egg is a shining white, like that of the last species, but smaller in proportion to the size of the bird.

LESSER SPOTTED WOODPECKER, *Picus minor*. The Lesser Spotted, or as it is sometimes called the “ Barred ” Woodpecker, I believe to be much more common than the last-mentioned species : it certainly is so in my own neighbourhood, where I have never met with the larger species, nearer than the one just before mentioned. There appears, however, to be some doubt as to which is the more common : the Rev. A. P. Morres, writing in the ‘ Zoologist ’ for 1865, asks the question, and adds

that he has frequently met with the present species in Berkshire, Somersetshire and Wiltshire, but never with the Greater. Montagu, on the other hand, asserts that the present species is the most rare of all the Woodpeckers, and Yarrell says that it is considered to be the more rare. I certainly agree with Mr. Morres, and consider this much the most common, as I not only frequently see it about alive, but I have also met with it much more commonly, both in the flesh and stuffed, at various birdstuffers' shops and in collections. It is resident with us all the year.

Both in food and habits it much resembles the two last-mentioned species, except that I think it is rather less given to climbing, as I have often seen it perching in the ordinary way on some small twig, and that very often the topmost one, of some small tree or bush.

The food of the Lesser Spotted Woodpecker consists mostly, if not entirely, of insects; Meyer says entirely, nothing being found in its stomach, either in summer or winter, but spiders, beetles, ants or their larvæ. Like the other Woodpeckers it seeks its food in the crevices of the bark of trees, searching, however, the branches rather than the trunk: it looks for food on the ground and amongst long grass.

The nest, if such it can be called, is always placed in a hole in a tree, at the bottom of which the

eggs are deposited, little or no real nest being made.

This is a very pretty bright little bird; the beak is black; the irides reddish hazel: forehead immediately over the beak dull white; cheeks, ear-coverts and a streak over the eye, white; top of the head scarlet, a narrow streak between the scarlet and the white over the eye to the back of the neck, and the back of the neck, black; a broad black streak extends across the back and includes part of the scapulars and lesser wing-coverts; the rest of the back is white, barred with black; the tail-coverts are black; the quill-feathers are nearly black, barred with white; the four centre tail-feathers are black, and not quite so pointed as in the last two species; the next feather on each side is tipped with white and the two outside feathers on each side are white, barred with black; throat and all the under surface dull greyish white; legs, toes and claws lead-colour. The top of the head in the female is a dullish white, without any red feathers, and the under surface is dull light brown. The young male birds assume the red colour on the top of the head during the first moult.

The eggs are a uniform white when blown, but when fresh taken have a sort of flesh-colour tint, owing to the yelk showing through; they are, of course, much smaller than those of the last-mentioned species.

WRYNECK, *Yunx torquilla*. The Wryneck is always included amongst the Picidæ, although differing from them in some respects, especially the tail-feathers, which are not strong and pointed like those of the true Woodpeckers, but, on the contrary, soft and somewhat rounded. Although this bird has two toes in front and two behind, it is by no means so decided a climber as the rest of the family in which it is included. In Guernsey, where I have had most opportunities of watching this bird, I have generally seen it perched in the ordinary way on a small branch of a tree, or low bush, or hedge. It is a summer visitor, arriving in this country in the middle of April, about the same time as the Cuckoo, from which circumstance it has had the name of "Cuckoo's Mate" given it. In Guernsey, where it is, as I said, very common, it is always called the "Mackerel Bird," as it arrives about the time the mackerel are in season: another very common local name for this bird is the "Snake Bird," from the peculiar noise it makes when disturbed, and from the snake-like manner in which it occasionally moves its head.

Though in general not amongst the earlier summer migrants, not arriving till the middle of April, and departing again at the end of August or beginning of September, occasional stragglers appear to arrive rather earlier, and also to make a later stay, the 19th of March being the earliest note I

can find of its arrival,* and the 25th of September being the latest note of its stay.† It is not a very common bird in these parts, and is not often to be seen about, nor are many specimens to be seen at the birdstuffers' shops, but this may arise as much from its being overlooked, on account of the general sombre colour of its plumage which consists of various shades of brown, as from its actual scarcity. Montagu, however, says it is more common in the eastern than in the western counties, adding that it is very rarely found in Cornwall.

The food of the Wryneck consists in a great measure of grubs, caterpillars and various other insects, which it picks out of the bark of trees, like the Woodpeckers, by means of its long tongue, the end of which, like that of those birds, is always moist with a sort of glutinous substance secreted by the bird; but it does not climb the trunks of trees in search of food like those birds. Ants and their eggs form a very large portion of the food of the Wryneck, so much so that Montagu says it has with considerable propriety been called the "Emmet-hunter:" Yarrell, quoting Bechstein, adds elderberries to the list of food.

Like the Woodpeckers, the Wryneck generally lays its eggs in a hole in a tree, without making much or indeed any nest.

* 'Zoologist' for 1864, p. 9044. † Id., 1865, p. 9810.

As I said before it is not a very gay bird, the colours of its plumage being confined to various shades of brown, but these are so curiously intermixed and blended together that when one examines it closely one must consider it a very pretty bird. The beak is brown; the irides hazel; the feathers on the forehead and top of the head are greyish brown, barred with dark reddish brown; the sides of the head and neck, as well as the back and scapulars, are greyish brown, each feather having a dark streak down the centre, which broadens into a sort of arrow-head near the tip; down the back of the neck and middle of the back there is a streak of dark umber-brown and reddish brown mixed, the wing-coverts and tertials are darkish brown, spotted, and the tertials also tipped with light greyish brown—there is a dark dusky streak in the centre of each spot; the primary and secondary quills have the inner web a uniform dull brown, the outer web the same, barred with light yellowish brown; the tail-feathers have two shades of greyish brown, much freckled and slightly barred with dusky; the throat is buff, narrowly but regularly barred with very dark brown, almost black; the breast is much the same as the back, but lighter; the belly is a much lighter buff than the throat, almost white, barred with narrow streaks of dark brown; legs, toes and claws brown.

The egg is white, much about the size of that of the Lesser Spotted Woodpecker.

Family CERTHIADÆ.

All the four species of Certhiadæ appear to be included amongst the birds of Somerset.

CREEPER, *Certhia familiaris*. This pretty interesting little bird is one of our commonest residents, and may be seen in every orchard, plantation or wooded hedge-row, climbing up the trunks and along the larger branches of the trees in search of food; it does not, however, confine its search to trees, for it may be constantly seen climbing over and picking insects from the chinks in old posts, rotten railings and even walls. I have also frequently seen it similarly occupied running over the matting on the inside of a summer-house. In habits it is a true climber, although it has not, like the Woodpecker, the outside toe reversed, but has three toes in front and one behind; it has, however, the stiff pointed feathers in the tail. It is by far the smallest of the Scansores, not exceeding the Blue Tit in size. Its food is entirely insects, consisting chiefly of small beetles, spiders, the larvæ of butterflies, and all the various insects that are usually to be found hidden in such places as I have before mentioned.

It is rather an early breeder, beginning to build about the beginning of April: its nest is placed either in a hole in a tree or behind a loose piece of bark. I have also found the nest in a chink between

some woodwork and the matting of a summer-house.

The Creeper is very unlike the Woodpeckers in the formation of its beak, which is long, narrow and considerably curved downwards; the upper mandible is dark horn-colour, the lower dull white; the irides dark hazel; the head and back of the neck are dark brown, streaked with light yellowish brown and dirty white, the lightest part being a very narrow streak in the centre and the tip of each feather; cheeks and ear-coverts the same; there is a small light streak over the eye; the back and scapulars are yellowish brown, each feather streaked with dirty white; the lesser wing-coverts are very dark brown, almost black, each feather tipped with buff; the greater coverts are the same, but the tips are lighter; the rump and tail-coverts are light reddish brown; the primary quills are dusky, tipped and barred on the outer web with dull white; secondaries the same, but barred with a brighter colour, inclining to buff; the tertials are greyish, with a light, nearly white, tip to each feather and a long dusky spot on the outer web; all the under parts are a dull smoky white.

The egg is white, spotted with orange-red, very like that of some of the Tits.

HOOROE, *Upupa epops*. This is an occasional summer visitant, rare indeed in this county, so much so that I can find no recorded instance of its capture or occurrence: indeed I hardly feel justified in

including it in this list, except that, from its peculiarity of appearance, it is less liable to be mistaken than any other bird. I have therefore included it on evidence that, in the case of any other bird, I should consider perfectly unreliable, for I only heard of one of these birds being seen at Monkton, near Taunton, during the months of April and May, in the year 1866: it was seen several times running about on a dung-hill near a farm-house, and was described as constantly erecting its crest: besides this peculiarity, I received such an accurate description of the bird that I feel quite sure it could be nothing but the Hoopoe. In other neighbouring counties it is by no means a very rare visitor, as in Cornwall, Devon and Dorsetshire, there are many records of its occurrence: it has also been taken in Wiltshire, and has indeed made its appearance in almost every county in England and Wales, and in a few Scotch counties. Although its appearances in England are usually confined to the spring and autumn it would probably remain to breed* were it not that the peculiarity of its appearance excites curiosity, and the gun is consequently always brought into immediate requisition. Instead of being shot on every possible occasion the visits of the Hoopoe to this country should be encouraged, as its food

* Yarrell records one instance of its doing so near Chichester.

appears to consist almost entirely of insects and their larvæ, beetles, worms and grubs.

Although included amongst the Scansores, this bird is not much, if anything, of a climber : it seeks its food almost entirely on the ground ; it has neither the reversed claw nor the stiff tail-feathers of the real climbers ; its beak, however, is something like that of the Creeper.

The nest is usually placed in a hole either in a tree or a wall, or rock ; the bare ground, however, is occasionally made use of.*

In plumage and general appearance the Hoopoe is a very peculiar bird, and when once seen is not very easily mistaken, even by the most careless observer. The beak is long and curved, like that of the Creeper, black at the tip and for nearly two-thirds of its length, pale flesh-colour at the base ; irides brown ;† it has a very long crest, the feathers of which rise from the forehead and increase in length towards the top of the head—they are of a brightish fawn-colour, tipped with black ; the sides of the head and back of the neck are rather paler in colour ; across the back are three half-circular bars, one of white between two of black ; the rump is white ; the upper tail-coverts white at the base and black towards the tip ; the feathers on the shoulder are of

* Meyer's 'British Birds,' vol. iv., p. 27.

† Yarrell, vol. ii., p. 186.

a pale brown, or sort of mouse-colour; the wing-coverts are black, with a transverse bar of buffy white; the primary quills are black, with a broadish bar of white about three-quarters of an inch from the tip of each feather; the secondaries and some of the tertials are black, very distinctly marked with large irregular spots and bars of white: the tertials nearest the body have a very large irregular patch of black, shaded to dullish fawn at the tip, outer edge and rest of the feathers white; the tail is black, with a very distinct band of white entirely across the centre; the under tail-coverts are white: the rest of the under parts pale fawn: the legs, toes and claws are black.*

The egg of the Hoopoe, according to Meyer's picture, is white.

NUTHATCH, *Sitta europæa*. The Nuthatch is by no means an uncommon bird; it is resident with us all the year, and may always be seen climbing in all directions about the trees in every orchard and plantation: it differs from most of the other climbers in being able to climb downwards as well as up, so it is not compelled like them to fly to the bottom of a tree and then work its way upwards, but it can alight wherever it likes, and work its way in every direction: though on this account perhaps a better climber than any of the other Scansores, it has

* Yarrell, vol. ii., p. 187.

neither the reversed claw nor the stiff tail-feathers of most of these birds.

The food of the Nuthatch consists partly of insects and partly of nuts, acorns and beech-masts: these it generally places in a chink in the bark of a tree or a slit in a gate-post or railing, and hammers at them with its strong beak until it succeeds in splitting them, or in making a hole sufficiently large to enable it to extract the kernel. In the insect way it eats caterpillars, spiders and beetles. It may, it is said, be tempted to pay frequent visits to any tree, even close by a house, by nuts being placed for it in the chinks of the bark, or even to a window if nuts and bread are placed for it on the window-sill; it then becomes so tame that it will take these things from the hand.

Like the Woodpeckers the Nuthatch places its nest in a hole in a tree, but it makes rather more nest than these birds.

The beak, which is thick and strong, is of a bluish black horn-colour, except the base of the under mandible, which is light brownish white; the irides are hazel; the head, neck, back, scapulars, wing-coverts, rump and tail-coverts are light bluish grey; there is a black streak from the base of the upper mandible through the eye and a short way down the sides of the neck; the quills are dusky, the secondaries and tertials rather broadly margined with the same colour as the back; the two centre feathers of

the tail are light bluish grey, the same as the back ; the next feather on each side is black, with a greyish tip ; the two next the same, with a spot of white near the tip on the inner web ; the outside feather on each side has a longish spot of white on the outer web also, but rather lower down than the other spot—the base of all these feathers is black ; chin and throat nearly white ; breast and belly buff ; the flanks and under tail-coverts are a sort of chesnut, the feathers on the latter tipped with white ; legs, toes and claws light brown.

The egg is much like that of the Creeper in colour, but considerably exceeds it in size, being quite as large as that of the Blackcap.

Family CUCULIDÆ.

The Cuckoos are the last of the British Scansores, and except for the fact of the outer toe on each foot being reversed, there seems to be no reason why they should be included in this division at all ; they, however, make a link between the Scansores and the last division of the Insesores, the Fissirostres, having the reversed toe, which is the peculiarity of many of the climbers, and in a great measure the wide gape of the Fissirostres. There are three species of Cuckoos now included in the list of British birds, but the appearance of two of these species has been so unusual that they ought not to retain their place in the list.

COMMON CUCKOO, *Cuculus canorus*. We all know that the Common Cuckoo is a summer migrant arriving here about the middle of April and departing in August or September; the old song limits its stay to August.

“ In April,
Come he will ;
In May,
He sings all day ;
In June,
He alters his tune ;
In July,
He prepares to fly ;
Come August,
Go he must.”

This bird has so many peculiarities, both of voice and habits, that it has attracted more attention than any other bird. The times of migration and changes in voice are tolerably accurately pointed out in the old verses I have quoted; but its very peculiar habit of placing its eggs in the nest of another bird, whose own young are invariably sacrificed to the rapacity of the young Cuckoo, has attracted much observation and given rise to many wild theories, amongst which I must place the theory of Dr. Baldamus (which gave rise to considerable discussion in the ‘Zoologist,’ in which useful periodical his paper on the subject was translated), that the Cuckoo has the power of colouring her egg to assimilate with that of the bird in whose nest it is placed: indeed the fact, which is

now pretty well established, that the Cuckoo does not lay its egg in the nest of another bird, but places it there afterwards, would alone, I think, be sufficient to upset that theory—to say nothing of the fact that the Cuckoo's eggs vary but little, and are not the least like the eggs of many of the birds in whose nest it is known to deposit them. That the Cuckoo places its egg in the nest of other birds with its beak is, I think, sufficiently proved by the fact that many of the nests chosen are either themselves of such a nature, or usually placed in such a position, as to preclude the possibility of the Cuckoo laying its own egg in the nest; for instance, the nest of the Redstart is usually placed in a hole either in a tree or a wall, the entrance to which is much too small for the Cuckoo; the nest of the Reed Warbler, which is not unfrequently chosen, is a domed structure, with only a hole left for the entrance of the owners, and this of course is much too small for the entrance of so large a bird as the Cuckoo—to say nothing of the impossibility of its accommodating itself to the narrow dimensions of the nest inside. Besides there are many instances on record of the female Cuckoo being shot with one of her own eggs in her mouth, one of which I quote from Mr. Newman's edition of Montagu's Dictionary:—"My curiosity," said the person who contributed this note, "was excited by seeing a Cuckoo fly over my head with something in its mouth, with which it alighted in a neighbouring

meadow; I reached the bird within twenty yards, and observed it in the act of progressing, in a similar way to the crawling of a Parrot, by the side of a drain, with the substance still in its beak: after traversing some distance it stopped short, and at the same time I fired. Upon nearing it I found the substance before mentioned to be its egg, I am sorry to say broken, but still quite satisfactory that this was the case. I think in all probability this bird was searching for a nest, perhaps that of the Meadow Pipit, for the depositing of its egg." All these facts, I think, make it sufficiently clear that the Cuckoo does not lay but places her egg in the nest of some other bird after it has been laid. I have, as well as I am able, made out a list of the various birds in whose nests the Cuckoo has been known to place its eggs in England; on the Continent the list may be considerably increased: for the more unusual ones I have given my authority, for the others I have not thought it worth while to do so.

Blackbird, *Yarrell*.

Hedgesparrow.

Robin.

Redstart.

Whitethroat, *Yarrell*.

Reed Warbler. Several instances in the 'Zoologist' and also Montagu's Dictionary, by Newman.

Wood Warbler, 'Zoologist' for 1863.

Willow Warbler, *Yarrell*.

Pied Wagtail.

Grey Wagtail, '*Zoologist*' for 1863.

Meadow Pipit.

Rock Pipit, '*Zoologist*' for 1863, and *Yarrell*.

Skylark, '*Zoologist*' for 1863, and *Yarrell*.

Woodlark, '*Zoologist*.'

Yellowhammer, *Yarrell*.

Chaffinch, *Yarrell*.

Greenfinch, *Yarrell*.

Linnet, '*Zoologist*' for 1863.

The fact that two Cuckoo's eggs are occasionally found in one nest has led to some discussion as to whether they belong to the same bird or to different ones; this question has not yet been quite satisfactorily cleared up. The better opinion seems to me to be that the eggs are placed there by two different birds, the old Cuckoo being probably aware that one such gormandizer as its own young would be quite sufficient for the foster-parents, and that they would not be equal to the support of more than one. It is very probable, however, that a Cuckoo wanting to deposit an egg, when it finds a convenient nest, drops it in, without taking any particular notice of the fact that occupation of the nest has already been taken by one of its own species. When this takes place, and the two young Cuckoos are hatched, the struggle for existence between them must be tremendous, as, being of nearly equal size and weight, neither of them would be able to put in practice its usual summary method of ejecting the legitimate tenants of the nest, by hoisting them over the side.

The food of the Cuckoo consists almost entirely of insects, all sorts of which, as well as caterpillars, are eaten by it; amongst caterpillars, however, it appears to prefer the rough hairy ones. Young Cuckoos adapt themselves with considerable ease to the natural food of the bird in whose nest they find themselves, their digestion being equal to any variety: when hatched, therefore, by insect-eating birds the young Cuckoo is fed on flies, beetles, caterpillars, grasshoppers and small snails, but when fed by any of the Finches or Buntings they do not appear to reject young wheat, small vetches, tender sprouts of grass and seeds;* but as most of these birds feed their young, partially at all events, with insects, the young Cuckoos get some of their proper food: under any circumstances it is a voracious feeder.

Cuckoos have often been kept tame, having been taken when young and fed upon raw meat and other things, but they do not appear to thrive properly without caterpillars and insects.

The Cuckoo is not a very gay bird in plumage: it may, at a distance, both from its appearance and from the manner of flight, be mistaken for a hawk; indeed the small birds themselves appear to make this mistake, as they may occasionally

* Yarrell, vol. ii., p. 199.

be seen mobbing the Cuckoo, much in the same manner as they do a Hawk. The beak of the adult Cuckoo is a dark bluish horn, except just at the base, which is pale brown; the irides are yellow; the head and the whole of the upper parts are uniform bluish slate-colour; the tail and quill-feathers are a shade darker; the tail-feathers are tipped with white and have also a few small spots of the same colour close to the shaft, each side of it, all the way up; the throat and breast are the same colour as the upper parts, but a very slightly lighter shade; flanks, belly and all the rest of the under parts are white, barred with bluish slate; the under surface of the wing is white, very broadly barred with black; legs and toes yellow, claws yellowish brown. The young bird of the year before its departure is very different: the beak is not so dark; the irides are brown; there is a white patch on the forehead and on the back of the head; the rest of the feathers of the head and neck are darkish slate, tipped and edged with dull white and pale brown; the back, scapulars, rump and tail-coverts are the same; the wing-coverts the same, but mottled with reddish brown; the quills are dusky, barred with white and reddish brown, and the outer web of the tertials is also mottled with reddish brown; the tail is dusky, very distinctly barred and mottled with brown and white; the throat is bluish slate, mottled with white; the rest of the under parts as in the old bird. At a

still younger age the whole of the upper parts are much more mottled with brown.

The eggs of the Cuckoo are dull dirty white ground, much spotted all over with brownish grey and a few black spots: they vary a little, some of them being a shade lighter than others.

With the Cuckoo ends this division of the Inses-sorial birds. I think we may fairly say that none of the birds included in it can be accused of doing any mischief, either to the gamekeeper, the agriculturist or the gardener, for a few nuts may well be granted to the Nuthatch; on the other hand, they are all of the greatest use by the destruction of caterpillars and various other mischievous insects.

Div. FISSIROSTRES.—Family MEROPIDÆ.

The last division of the Inses-sorial order at which we have now arrived, derives its name from the wide gape of all the birds included in it, the mouth indeed opening as far back as underneath the eye, and is almost absurdly disproportioned to the beak, which, in the greater part of the birds included in this division, is very small, although in some, as the Kingfisher, and the Bee-eaters, this is not the case.

ROLLER, *Coracias garrula*. The species at present under consideration is a very bright, beautiful,

foreign-looking bird : it is a rare summer visitant to these islands. As far as this county is concerned I only know of one instance of its having been taken, and that was a good many years ago, at Orchard Portman, near Taunton : this specimen came into the collection of Mr. Popham, of Bagborough, and is now in the possession of Mr. Bisset.

The food of the Roller, like that of most of the Fissirostres, is almost entirely insect, consisting of beetles, grasshoppers, and other insects and their larvæ, to which, in this case, may be added worms and small frogs.

As it is a summer visitor it probably would, if unmolested, occasionally breed in this country, but, on account of its bright gay plumage, this is not likely to be the case.

The nest is made in a hole in a tree or in a bank ; it is lined with small fibres, straw, feathers and hair.

The description of this bird I have taken from Yarrell :—" The beak is black ; irides reddish brown ; behind the eye is a triangular naked spot ; head, neck and wing-coverts greenish blue, approaching in richness to verditer-blue ; back, scapulars and tertials yellowish brown, shoulders and rump China-blue ; upper tail-coverts Berlin-blue ; the two middle tail-feathers blackish green ; the others for two-thirds of their length bluish green, the shafts black ; the outer feather on each side tipped with black ;

the primary and secondary quill-feathers verditer-blue at the base, the rest dark bluish black; chin greyish white; throat verditer; all the under surface of the body and the under wing-coverts pale bluish green; under surface of primaries and secondaries rich Berlin-blue for two-thirds of their length, then tipped with greyish blue; the outer elongated tail-feather on each side almost wholly blue, but tipped with dark blue; these longer outside tail-feathers distinguish the male bird; the legs and toes yellowish brown; the claws black." Any one comparing this description with the painted picture in Meyer's smaller edition of 'British Birds' would hardly imagine they could be meant for the same bird.

Yarrell says that the egg of this bird is white, and resembles that of the Kingfisher in everything but size.

Family HALCYONIDÆ.

KINGFISHER, *Alcedo ispida*. There are now two species of Kingfisher included in the list of British Birds. The present species, the brightest and most beautiful of all our commoner British birds (it may perhaps be equalled, if not excelled, by some of our rarer summer visitors) is still tolerably plentiful near all our streams and rivers, though it has suffered considerable persecution and had its numbers much diminished by the mania of young ladies

for bright-coloured birds as ornaments for their hats, and also by the more regular demands of fishing-tackle makers; the gamekeeper also occasionally makes an onslaught on this bird, as he considers it destructive to his trout; the birdstuffer may also be numbered as one of the enemies of the Kingfisher, as he can always make up a pretty case and get a ready sale for so bright and beautiful a bird; but in spite of all these enemies the Kingfisher may still be seen darting, like an animated blue light, from one fishing-station to another, or sitting patiently on some branch or rock overhanging the water till his food comes within reach of his pounce, when he drops on it with almost unerring aim.

The food of the Kingfisher consists mostly of small fish, such as minnows, loaches, sticklebacks, and perhaps occasionally young trout and battle-heads, which latter sometimes prove fatal to the poor Kingfisher, as the big head of that fish has been known to stick in its throat and choke it;* leaches and water beetles also form part of its food. On the sea-coast it feeds on the small fish that are left by the receding tide in the natural aquariums in the rocks, and in calm weather on any fish it can sur-

* I once found an eel which had been choked in the same way: when I found it, it was quite dead, and the tail of the battle-head was sticking out of its mouth, the head being firmly fixed in its throat.

prise in the sea itself. In some situations in which I have seen the Kingfisher fishing from the wild rocks, it must in stormy weather find considerable difficulty in maintaining itself; for instance, on the western part of the island of Guernsey where even a moderate breeze makes sea enough to interrupt its occupation, and heavy westerly gales must quite put a stop to it for many days together.

The nest of the Kingfisher is always placed in a hole, generally in one dug by itself, if its fortune has placed it in a situation where it can find a bank sufficiently soft to allow it to dig for itself; otherwise a hole amongst the roots of alder or other trees growing by the side of a stream, or a deep crevice in a rock, will serve its turn; but if some such convenient place cannot be found it will quit the immediate vicinity of water, and seek for a place further off, instances being recorded of its breeding quite as much as a mile from the water, in which case the parent birds must have a hard time of it to supply food for their ever-voracious young. It does not appear quite clearly made out yet whether the Kingfisher builds any nest in its hole: it is confidently asserted by some that it does make a nest entirely of fish-bones, and it is equally confidently asserted by others that these bones are not brought into the hole for the purpose of building a nest, but that the young ones, being fed upon fish, reject the bones in the same way that Hawks reject feathers and bones,

and in consequence of this, before they leave the nest, there is a considerable accumulation of bones, which get piled up round the young birds, and present the appearance of a regularly built nest. How this may be I must leave to some one who lives in a place more frequented by these birds to settle. I can, however, bear witness to the fact of the "very ancient and fish-like smell" which pervades the hole before the young birds leave their home.

Kingfishers become tolerably tame, and may be kept in confinement, especially if placed in an aviary where fresh water can be introduced, in which a sufficient supply of minnows and other small fish can be kept, as is done at the Zoological Gardens in London.

It is almost impossible, either by painting or by a written description, to give any adequate idea of the brilliancy of the plumage of this bird. The beak, which is very long and large for the size of the bird, is nearly black, except the base of the lower mandible, which is orange; the irides are red; the lore dusky; the top of the head dark blue, ribbed with bright light blue (all the blue in the Kingfisher varies, according to the light in which the bird is seen, from blue to green); there is a small patch above, and a long one under, the eye, reaching to the ear-coverts, of bright bay; the ear-coverts are white, some of the feathers are slightly tinged at the

edges with bay; under this again, from the base of the lower mandible to beneath the ear-coverts, is a long streak of the same colour as the top of the head; the back, rump and tail-coverts are a beautiful bright glossy light blue; the scapulars and a part of the back are a darker blue; the wing-coverts are the same, but with a speck of the bright blue of the back at the tip of each feather; the quill-feathers are dark dusky, almost black, on the inner webs, greenish blue on the outer; the tail-feathers are brightish blue, but darker than the tail-coverts; the chin and throat are dull dirty white; the rest of the under parts are bay, palest on the under tail-coverts; legs and toes orange; the outside toe is united to the middle one as far as the second joint, and the inside toe as far as the first joint; claws rather darker than the toes.

The egg is a plain shining white.

Family HIRUNDINIDÆ.

There are now six Swallows and Martins and three Swifts included in the list of British birds, three of which seem to have only made one appearance in England: as Somersetshire birds I can only claim five out of the nine.

SWALLOW, *Hirundo rustica*. This well-known and always-welcome summer visitor is very common

throughout the county: it is moderately early in its arrival, being always here by the middle of April, and sometimes considerably earlier, for I have a note of having seen one at Wells, in the year 1866, as early as the 3rd of April, and here on the 5th; in 1867 I noted the appearance of a Swallow here on the 4th: all my previous notes are a week later at least. In the year 1867 they made a peculiarly long stay, from the 5th of April to the 28th of November, on which day I saw two hawking for flies over one of my fields.

The food of the Swallow consists entirely of insects of various sorts, which it for the most part takes on the wing, and in the untiring pursuit of which it passes the whole of the day, from the earliest dawn to quite late in the evening. Though almost invariably taking its food on the wing it may sometimes, in very wet weather, be seen searching for prey on foot: at such times I have seen these birds waddling about the muddy gravel-walks in a most awkward manner, looking for flies which had been beaten down to the ground or only just able to rise above it: on such occasions they present a great contrast to the active sprightly Water Wagtail. This mode of feeding in wet weather, as well as the clumsiness of the Swallow when on the ground, has been noticed, in the 'Zoologist' for 1866, by Mr. Blake-Knox, in which note this gentleman also observes that the occasional dipping of Swallows, which every

one must have noticed, is not always for the purpose of drinking, but for the purpose of catching those funny little coleopterous insects which abound in every pool, and which he calls "whirlygigs"—I suppose from their curious mode of progression. The May-fly is a favourite dainty for the Swallow and for all its congeners, as it is for all other fly-eaters.

The nest of the Swallow is usually placed against the sides of an unused chimney, or amongst the rafters of a linhay or out-house. Yarrell mentions that a pair of Swallows made their nest in an open drawer in an unused garret, to which they obtained access through a broken pane of glass: he also says that another pair attached their nest to the body and wing of an Owl that had been nailed against a barn-door. The nest of the Swallow is made of clay or mud, much in the same way as that of the Martin, the chief difference being in the situation, the Swallow generally choosing some place where its nest is quite under the protection of a roof; the Martin, on the other hand, being contented with the slight protection afforded by the overhanging eaves or thatch of a building. Both Swallows and Martins may be constantly seen collecting materials for their nests at the edge of some muddy puddle or pond, and in wet weather on the roads, which (except the occasional instances above mentioned) is the only time they are ever seen on the ground.

The beak of the Swallow is black, and small for

the size of the gape; the irides hazel; the forehead, chin and throat reddish bay; the head, neck, back, scapulars, wing- and tail-coverts are a dark glossy blue, with purplish reflections; quills and greater wing-coverts brownish black; the tail the same, the exterior feather on each side is very much longer than the rest of the tail-feathers, and considerably narrower towards the tip than at the base; all the tail-feathers, except the two centre ones, have a roundish spot of white on the inner web; under the reddish bay on the throat is a broad dark band, almost black; all the rest of the under parts are a creamy white; the legs, toes and claws are black. The markings of the female are not so distinct as of the male, and the narrow tips of the outer tail-feathers not so long. The young birds of the year have not the bay mark on the forehead, and the chin has only a slight tinge of that colour; the white spots on the tail are wanting, as is the narrow elongated part of the two outside feathers. Varieties of the Swallow occasionally occur, white and buff being the most common.

The egg is white, speckled all over with small orange spots.

MARTIN, *Hirundo urbana*.

“ This guest of summer
The temple-haunting Martlet does approve,
By his lov'd mansionry, that the heavens' breath
Smells wooingly here,”

and is accordingly a constant and numerous summer visitor to the "summer county," arriving about the same time as the Swallow,—Yarrell says a few days later, and this appears to me to be the case, but there is very little difference,—and departing also about the same time. There is one very late instance of the stay of this bird recorded in the 'Zoologist'—as late as the 10th of December:* several other instances of late stay are recorded, but this is the latest I can find.

The food of the Martin, like that of the Swallow, consists entirely of insects, which it takes on the wing in the same manner as that bird.

The nest is made of mud, and is usually fixed against the side of a house, or some other building, immediately beneath the roof or coping, or some projecting "jutting frieze or coign of vantage." Whole colonies of nests may be seen on the cliffs by the sea-side, some overhanging portion of rock being taken advantage of, immediately underneath which the nest is usually fixed: in such places as these I have watched them, in considerable numbers,—especially at Teignmouth,—feeding their young, as late in the year as September: these, therefore, must have been second or even third broods, and the young can only be just able to fly when they have to begin their migratory journey.

* 'Zoologist' for 1866 (Second Series, p. 172).

The beak of the Martin is black; the irides brown; the head, neck, back, scapulars and lesser wing-coverts are a dark glossy blue; the rump and tail-coverts pure white; the quills and tail are brownish black; the tail is forked, but not so much so as that of the Swallow, and the elongated parts of the outer feathers are wanting; all the under parts are pure white; the legs and toes are pale flesh-colour, nearly covered with short downy white feathers; the claws are greyish horn. The young bird of the year is not so glossy on the back; the tertials are rather broadly tipped with white, and the breast is slightly clouded with dusky. Varieties of this bird occasionally occur, the commonest being white.

The egg is plain white, without any spots.

SAND MARTIN, *Hirundo riparia*. The Sand Martin, although perhaps more local in its distribution, is in most parts of the county—especially where it can find convenient accommodation for its nest—quite as numerous as either the House Martin or the Swallow. It is a summer visitor, arriving about the same time as the two last-mentioned species, and generally in company with them. Yarrell, indeed, places the arrival of the Sand Martin a few days earlier than that of either of the others; but, as far as I have been able to observe the arrival of these birds, I have generally found all the three species arrive about the same time: the Sand Martins certainly make an earlier appearance in force, but

amongst these flocks are almost always a few Martins and Swallows.

The Sand Martin differs considerably from the other two species in the manner of building and the locality in which it places its nest: this is always in a hole, which the birds usually excavate for themselves: the place chosen for this excavation is generally in some steep sand-bank or side of a cliff, where the nature of the soil allows them to work: about here they generally choose the perpendicular side of some quarry: the holes are made quite round, and are generally some two or three feet deep from the face of the bank or cliff: at the bottom of the hole a slight nest is made of hay and feathers; in places nearer the sea, sea-weed appears to be the article mostly made use of. In describing these holes all writers appear to agree in saying to young bird-nesters, "Beware of fleas," which abound in the nest itself, and even round the mouth of the hole in which it is placed.

The food of the Sand Martin, like that of the Swallow and House Martin, consists almost entirely of insects, mostly flying ones. Yarrell, quoting White's 'Selborne,' says the young are occasionally fed with dragonflies as long as themselves. I have never myself detected any of the Hirundinidæ taking dragonflies, or indeed anything much longer than a May-fly, which is a very favourite food with all of them.

The beak of the Sand Martin is dark brown, nearly black; the irides are hazel; the head, neck, back and all the upper parts are uniform dark hair-brown; the quills are a darker brown, almost black; the tail is the same; the chin and throat are white; there is a broadish dark brown band on the breast, and the flanks also are brown; all the rest of the under parts are white; the legs, toes and claws are dark brown; there are a few lightish feathers just above the hind toe. In the young birds of the year the feathers on the head, neck, back, scapulars, wing-coverts, tertial-quills, rump and tail-coverts, are margined with light rusty brown; the margins on the head and neck appear to wear away first; there is a light streak on the outer web of each of the tail-feathers, except the two centre ones. Varieties, mostly white or cream-colour, occasionally make their appearance.

The egg is plain white, rather smaller than that of the Swallow.

SWIFT, *Cypselus apus*. This peculiar-looking bird is the last to arrive of all the Hirundinidæ and the earliest to depart, making so short a stay with us that it would hardly appear worth its while to make so long a journey: my own notes of its arrival vary from the 28th of April to the 2nd of May, and the notes of its departure nearly agree; "Seen no Swifts since the 18th of August." One year I was crossing from Weymouth to Guernsey in the steamer, on the

18th of August, when, about half way across (we had just lost sight of Portland-bill but had not made the Caskets), a considerable flock of Swifts overtook and passed the steamer; they were spread out in a long line, like a line of skirmishers, reaching from west to east nearly as far as we could see: the course they were steering was nearly south by east, a little to the eastward of our own course: this would have brought them to land between Cape La Hogue and Cherbourg: they were plodding along, in a steady, business-like manner, nearly against a tolerably strong southerly breeze: there was none of the dashing here and there, and rapid turnings and twistings, which we so usually associate with the flight of the Swift. This bird is not always so regular in its departure as my notes would lead one to suppose, for there is a note in the 'Zoologist' for 1863 which records the stay of Swifts in some numbers as late as the 10th of September, and a few straggling birds as late as the end of the month; and Yarrell records their stay in the South of Devon as late as the 27th of November.

The nest is usually placed in a hole in some old building, such as a cathedral or church-tower, or some old castle or ruin, and occasionally under the thatch of a cottage. Cliffs also, either by the sea-side or inland cliffs like Cheddar, are also a favourite haunt for these birds, and their nests are placed amongst the crevices and interstices. If buildings

or cliffs are not to be found the Swift will make its nest in a hole in a tree.

The Swift seems to have almost an unlimited power of flight, as it may be seen on the wing from early morning to late in the night, either hawking about for its insect food or indulging in noisy quarrels with others of its own species, generally high in the air, far above the Swallows and Martins, except in very wet weather, when it is driven from its happy hunting-grounds aloft to seek food nearer the earth; but even then it never alights on the ground, from which it has some trouble in rising, as the Swallow has been described as doing: on those occasions when it is driven near to the ground it sometimes makes an incautious dash at the artificial fly of the fly-fisher, and is said to give considerable play before it can be landed. The peculiar form of this bird, as well as its weight, would hardly lead one at first to suppose it possessed such power of flight: the wings, certainly, are very long and very much arched, the first primary being the longest, from which they decrease rapidly in length; the secondaries are nearly equal in length, and the tertials very short in proportion to the size of the bird, more so, perhaps, than those of any other bird except the Gannet. The great power and velocity of flight of this bird, taken together with its weight, bears out, to a certain extent, the assertion of the Duke of Argyle that the heavier in pro-

portion a bird is, the greater is its power and velocity of flight.*

In the colour of its plumage the Swift is a dark sombre-looking bird, the whole of its plumage, except the chin, which is white, being a dark, dusky brown, slightly glossed (in some lights) with dull sap-green; the under parts are perhaps a little darker and want the gloss of the upper parts; the legs, toes and claws are black; the legs are very short and powerless, walking being an exercise this bird does not indulge in. The young birds have the tertials and some of the feathers on the upper parts tipped with buffy white. Varieties occasionally occur.

The egg of the Swift is plain white, and rather a long oblong in shape.

ALPINE SWIFT, *Cypselus alpinus*. I find I have to mention this rare British bird, in consequence of a notice of its occurrence in the 'Proceedings of the Somerset Archæological and Natural History Society.' In the temporary local museum, formed during the Meeting of the Society at Weston-super-Mare, in the year 1851, amongst other things there exhibited, Mr. Fry, of Axbridge, is said to have shown "Five specimens in Ornithology, neatly mounted, with appropriate landscape back-grounds, including amongst them one of the Alpine Swift shot in this

* Paper by the Duke of Argyle in the 'Sunday Magazine' for 1867.

county." From a Society professing to call itself a "Natural History Society" we might have hoped for some fuller accounts of the "five specimens in Ornithology" than that they were "neatly mounted with appropriate landscape back-grounds." Of a bird so rare as the Alpine Swift we should have certainly liked to know, at least, the when and where of its capture. However, as it was shot in the county, I must include it in the list of Somersetshire birds.

Though rare, this bird has been taken in several counties in Great Britain and Ireland; its general habitation seems to be the islands in and countries adjoining the Mediterranean. It is a migratory species, going northward across that sea from Africa to Europe in summer. It appears to have much the same habits as the Common Swift, feeding on various sorts of insects, which it seeks far in the higher regions of the air.

The nest is placed in the fissures of high rocks, and in the loftiest parts of cathedral and church-towers: it is made of straw and moss.*

This bird may readily be distinguished from the Common Swift by its white belly and its larger size. Yarrell describes the Alpine Swift as follows:—"The beak is black, and longer in proportion than in the Common Swift; the irides are blackish brown; the top of the head, sides of the neck and all the

* Yarrell, vol. ii., p. 278.

upper surface of the body, wings and tail nearly uniform hair-brown; chin, throat, breast and belly white; a band across the upper part of the breast, the thighs, vent and under tail-coverts hair-brown; feathers on the legs brown; toes orange-brown; claws dark brown."

The eggs are white, and elongated, like those of the Common Swift.

This is the last of the Hirundinidæ I can claim for Somersetshire. Either collectively or individually no one has a word to say against any of the family: they eat neither fruit, grain nor buds, but do an unlimited amount of good by the destruction of flies and gnats, in search of which they are most indefatigable. Though not liable to attacks from man on the supposition that they do him mischief, I am sorry to say shooting these birds is considered an amusement, not only by school-boys who manage to borrow a gun on a holiday, but by grown-up men. They are extremely susceptible of changes in the weather, and a succession of cold, wet, windy weather kills many of them. The Martins seem to be the most susceptible; for instance, after some cold rough weather in the middle of August, this year (1868), I picked up seven Martins and one Swallow dead: the gizzards of all those I examined were perfectly empty,

Family CAPRIMULGIDÆ.

NIGHTJAR, *Caprimulgus europæus*. This very odd-looking bird, the only one of the Caprimulgidæ that can with any propriety be considered British, is tolerably numerous in this county, but rather local in its distribution, as it chiefly delights in rough and stony places; and in such places I have generally found it, as amongst the rough stones, fern and heather of the Quantock Hills, where it is much more numerous than it is in the Vale.

The name which I have chosen for this bird is perhaps the one now most commonly used; but it rejoices in more names than any bird in the British list—some of them merely local, and some being much more general: besides the usual name “Nightjar,” it is called “Goatsucker,” “Fern Owl,” “Dor Hawk,” “Churn Owl,” “Goat Owl,” “Wheelbird,” “Night Hawk” and “Night Crow,” the latter of which denominations is perhaps the more common here. The name “Goatsucker,” as well as the Latin names applied both to this bird and generally to the family, “Caprimulgus” and “Caprimulgidæ,” must have arisen from a popular error, which, as Bewick says, has no foundation but in ignorance and superstition.

The Nightjar is a short summer visitor to England, not arriving till the middle of May, and departing in September: I have shot one as late as the 18th of

that month. It is decidedly nocturnal in its habits, lying hid under tufts of heather or fern, or under rough stones, during the day, and coming abroad in the evening in search of its food, which consists of insects, mostly nocturnal ones, such as moths, cock-chaffers and fern-flies. Yarrell says the young birds are easy to rear, and that he has known them kept through their first winter, but that they never attempted to feed themselves. Meyer, however, says that he never succeeded in keeping them alive, even by a kitchen fire, after the first two or three frosty nights.

The nest is a very slight affair, merely a hole scooped in the ground, under cover of some rough plants or stones.

The plumage of the Nightjar is so minutely streaked, freckled and spotted with various shades of grey and brown that it is very difficult to describe. I shall only attempt a very general description, which will be quite sufficient, as it is so peculiar in appearance that it cannot be mistaken for any other British bird, or indeed for anything except some of its own family, only one other of which has been recognized as British, and that has only occurred once. The beak, which is very small, has the upper mandible black, the lower one black at the tip and pale brown at the base; the mouth, which, when opened, looks enormously disproportioned both to the little beak and to the head, is pale flesh-colour inside; the

irides are black; the head, neck, back and tail-coverts are mostly grey, minutely freckled and pencilled with dark brown, of which colour there are many long streaks, especially one on the middle of the head; the scapulars and wing-coverts are a rich dark brown, marked and freckled with yellowish brown and grey; primary and secondary quills darkish brown, irregularly barred and spotted with rich orange-brown, and freckled with grey, more especially towards the tips; the tertials are almost wholly grey, freckled with dark brown; the two centre feathers of the tail are grey, tolerably regularly barred with dark brown, the grey parts being much freckled with the same colour; the outer feathers are more like the primary quills in colour and marking; the throat is dark brown and orange-brown mixed,—there is a light, almost white, spot on each side of it; the belly and the rest of the under parts are greyish brown, thickly and rather regularly barred with dark brown. The male bird is easily distinguished from the female, as it has a patch of white on the inner web of each of the three first primaries, and the two outer feathers of the tail have broad white ends. The legs, which are very short and much feathered, are orange-brown on the bare parts; the toes and claws are the same colour, the centre toe being much the longest, and having the inner edge of the claw much notched like a saw. The young birds of the year are much like the old ones.

The egg is large for the size of the bird; white, much blotched and smeared with dusky grey.

With the Nightjar ends both the division Fissirostres as well as the great and important Order of Insesores.

ORDER RASORES.—*Family* COLUMBIDÆ.

I now come to the third Order, that of Rasores, which, although by no means so numerous as most of the other Orders, nevertheless quite equals them in importance, as to it belongs the principal inhabitants of the dovecote, the poultry yard and the game preserve. The British species included in this Order are only twenty-one, and of these only sixteen appear to me to have a claim to a place in the list of British birds, and only half of that number—or eight out of the sixteen—can be included in my list. The Columbidae, or Pigeons, are the first family of this Order that claim our attention besides those here enumerated there is one other species of this family, the Passenger Pigeon, included in the British list, but it appears only to have been twice noticed in England.

WOOD PIGEON, *Columba palumbus*. The first of the Columbidae I have to notice is the Wood Pigeon: it is a resident and very numerous species in this

county, and is apparently increasing in numbers: this increase is probably partly owing to the destruction of the larger Hawks and birds of prey by game-keepers, and also to the extreme wariness of the birds themselves, who do not often give a chance of a shot at them in the day-time: in the evening, however, during the autumn and winter, when they come into the woods and plantations to roost in large flocks, considerable numbers may be shot by any one lying in wait for them under the trees, especially if the evening be rough and windy.

In the autumn and earlier part of the winter Wood Pigeons are very good eating—almost, if not quite, equal to Partridges; and the farmer may then repay himself for the damage done to his crops by these birds, and have an evening's sport into the bargain; but later in the winter and towards the beginning of spring, when they attack the crops of Swede and other turnips, I cannot say so much for their goodness for the kitchen, as they then become very rank and bitter.

After reading the following bill of fare no one will be surprised that the farmer is occasionally a little put out by the way his crops are devoured by Wood Pigeons, especially where they are at all numerous; but, after all, the damage done to him does not appear to be sufficient to warrant such extraordinary means of destruction as poisoned grain or shooting the birds on their nests (when they are certainly

easy of approach, but totally unfit for eating), or the formation of Societies devoted to their destruction, such as that mentioned in the 'Zoologist' for 1866, where the farmers of a certain district formed an Association for this purpose, and not only pledged themselves to the destruction of Wood Pigeons, but sent circulars to their landlords requesting them to assist in the destruction of these birds on their estates.

Like all the Rasorial Order, Wood Pigeons feed mostly on farm produce: wheat and barley in great quantities, oats occasionally (not a very favourite food), peas by the quart, beans and tares, Swede and common turnips (both the root and the greens), clover,* rape and cabbage, all come within the range of their appetite. On the other hand, the seeds of various sorts of weeds—especially charlock and dock seeds, the latter in considerable quantities, their crops having been found quite distended with it—may form some little set off to the mischief done. A great portion of their food also consists of things which cannot be included in either of the above categories, as they do neither good nor harm to the farmer, such as acorns and beech-masts, which form a very favourite portion of their food: to show

* The crop of one killed by myself in April was perfectly full of clover; in the gizzard was the same, and seeds of weeds and white stones.

the extent to which these birds gormandize on this food I may mention the result of the examination of two birds made by myself: the first was on the 10th of October, an old bird, in the crop of which were thirty-seven beech-masts and in the gizzard eight others sufficiently whole to be counted, besides digested portions of others; there were also a good many white stones: the other, a young bird only just able to fly, was examined on the 24th of October, and had the astonishing number of seventy-seven beech-masts and one large acorn in its crop; the gizzard I did not examine. Holly, ivy and whortleberries, as well as hips and haws, may be added.

I do not like to say anything that would create a prejudice against the Wood Pigeon, or cause the formation of a Society like the one above mentioned, but as a matter of fact I think it right to refer to a note, by Mr. Cordeaux, in the 'Zoologist' for 1867, in which he mentions the contents of the crops and gizzards of two Wood Pigeons: the first was shot on the 1st of November and had seventy-six grains of barley in the crop, and in the gizzard partly digested barley with the usual accompaniment of sharp angular stones; the other bird, shot on the 27th of November, had in the crop four hundred and thirty grains of barley, one charlock-seed and a few fragments of red clover-plant, and in the gizzard barley and small stones. In spite of this amount of barley, which, compared with the one charlock-seed,

puts one in mind of Falstaff's incredible amount of sack to the one poor pennyworth of bread, the two Wood Pigeons had not really done the farmer so much harm as may be supposed: his crop of barley having by that time been gathered in, they had only gleaned up the wasted and shelled out grains, or what they could pick up round ricks; at that time of year, too, the farmer might have revenged and paid himself by shooting and eating the Wood Pigeons, and he would have found them quite as good eating as any Partridge. In the crop of a Wood Pigeon shot by myself in a wheat-field in August were one hundred and forty-six grains of wheat; the gizzard was also crammed with wheat.

The nest of the Wood Pigeon is generally placed in a high bush or shrub, or in a moderately low tree, or in thick ivy by the side of a tree; indeed some sort of evergreen is generally chosen for the earlier nests, such as a holly or highish laurel. The nest itself is a very slight structure of sticks, so loosely put together that the eggs and the young birds may be seen through it. Yarrell says they have sometimes as many as three broods in the year: I should think, however, he might have said four, as they are rather early nesters, and go on laying until late in the autumn. I have frequently myself found their nests, with young birds in them not fully fledged, when out shooting in October, as late indeed as the 18th of that month; and an

instance is recorded in the 'Zoologist' of a nest having been found as late as the 23rd of October.

The Wood Pigeon (as well as the rest of the Pigeon family) has great power and velocity of flight, and being a heavy bird, in comparison with some others of nearly the same size, bears out to a certain extent the Duke of Argyle's theory of weight before alluded to.* The breast-bone also is very strong and solid and the keel very deep, measuring one inch and one line in depth, while that of the Rook measures only eight lines, that of the Partridge ten lines, and that of the Common Buzzard (a larger bird) measures only eight lines in depth.

The Wood Pigeon cannot be kept, like the common tame Pigeons, in a semi-domestic state, though it can be kept in a state of confinement, and it is then said to grow very tame; but it has not been known to breed in this state or to cross with any other Pigeon. In plumage the "Ring Dove," as this bird is frequently called, from the white patch on each side of the neck (which gives a sort of appearance of a ring), is a handsome, showy bird. The beak is reddish orange, the soft part about the nostrils almost white; the irides straw-yellow; the head and back of the neck greyish blue: the back, scapulars, wing-coverts (except a few of the outer

* According to Montagu the Wood Pigeon weighs twenty ounces, the Partridge only fifteen ounces.

ones) and the tertials nearly the same, but a shade darker and with a slight brownish tinge; the rump and tail-coverts the same as the head, if anything a little lighter; the tail-feathers are black at the tip, in the centre is a broadish band of light bluish grey, and the base is dark bluish grey; the outer wing-coverts, both greater and lesser, are white, and those next inside are white on the outer web only—this makes a conspicuous white patch on the wing; the bastard wing is black; the primary quills nearly black, but with a streak of white on the outer web, broadest towards the base; on each side of the neck is a conspicuous white patch—this patch is surrounded by feathers reflecting a metallic gloss of purple and green; chin and throat bluish grey, like the head; the breast is purplish pink: belly and thighs nearly white, but being tinged with the same colour as the breast it gives them a dirty appearance; flanks and under tail-coverts nearly the same as the upper tail-coverts, but slightly lighter; the legs and toes red; claws brown. The female is the same as the male. The young birds in their first plumage may be distinguished from the old ones, as they want the white patches on the side of the neck. Varieties occasionally occur, mostly spotted over the body with white, but such, or any varieties, appear to be very unusual; not one has ever come under my own observation.

The egg is plain white, rather larger than that of the Common Pigeon.

STOCK DOVE, *Columba ænas*. The Stock Dove is by no means a common species in this county; specimens, however, occasionally occur, roosting with Wood Pigeons, and are sometimes shot by mistake. One of my specimens was shot in this way in a small plantation near here: I have also one in the aviary which was picked up wounded some years ago: it has lived in my aviary ever since, somewhat contentedly, and is tolerably tame: if I had a male bird I think they would probably breed, as this one is constantly laying eggs and is most indefatigable in sitting on them: it will not, however, pair either with the Turtle Dove or the foreign Ring Dove (*Columba risoria*). The Stock Dove is resident here throughout the year. Meyer says they are not found in England after November, but that is a mistake, as the one in my collection was shot in January, and there are also notices in the 'Zoologist' of their being killed during the winter months, generally mixed up with flocks of Wood Pigeons.

The food of the present species is much the same as that of the Wood Pigeon, but it is not sufficiently numerous to do any real damage: it consists, according to Yarrell, of "young leaves, peas, grain, seeds, berries, turnip-leaves, beech-nuts, acorns," &c.

The nest is usually placed in a hole in an old tree, but if that cannot be found a rabbit-hole will be

made to answer the purpose, or even the bare ground, under a furze or other bush; and one instance is recorded of the Stock Dove breeding in a church-tower.*

Bewick has made a slight mistake about this species, having confused it with the Rock Dove, or Blue Rock Dove, the picture being undoubtedly that of the Rock Dove, and the name that of the Wild Pigeon or Stock Dove: the two species are, however, perfectly distinct both in plumage and habits, the present species more resembling the Wood Pigeon in habits, roosting and perching in trees, which the Rock Dove scarcely ever does.† In appearance it is easily distinguished from either of the others: from the Wood Pigeon it differs in having no white on the neck or the wing; it is also considerably smaller: from the Rock Dove, or real Blue Rock—for the name “Blue Rock” is in some places applied to this bird—it differs in wanting the two conspicuous black bands across the wing and the white on the lower part of the back.

The beak of the Stock Dove is reddish orange; the irides scarlet; the head, neck, back, scapulars, wing-coverts and tertials are bluish grey; on some of the greater wing-coverts, and on some of the

* ‘Zoologist’ for 1867 (Second Series, p. 758).

† For one doubtful instance see ‘Zoologist’ for 1863, pp. 8825-6.

tertials nearest the body, there is a dark dusky spot, almost black: Yarrell seems to think the spot on the coverts is only occasional; my two stuffed specimens, however, as well as the live one, possess it, and Meyer seems to think it constant, as he says a row of black blotches takes the place of the two rows or bands of black on the wings of the Rock Dove: on the sides of the neck the feathers have a metallic gloss reflecting green and purple: the quills are dusky; the rump and tail-coverts are a lighter shade of the same colour as the back; the tail-feathers are dusky at the tip, all the rest is bluish grey, except the base of the outer web of the outside feather on each side, which is white; the chin and throat are the same as the back and head; on the breast there is a beautiful pinkish purple tinge; the rest of the under parts are nearly the same as the upper, but rather lighter, especially on the belly; the legs, toes and claws are reddish brown. The male and female scarcely differ in plumage, except that the female is not quite so brightly coloured as the male. The young before their first moult have no shining metallic feathers on the neck, and the dark spots on the wings are wanting.*

The egg is white, like that of the Wood Pigeon, but smaller.

ROCK DOVE, *Columba livia*. This is the species

* Yarrell, vol. ii., p. 297.

from which all our numerous varieties of tame and partially tame Pigeons derive their origin. How such an almost endless number of varieties have been developed from this one species I must leave to Mr. Darwin to explain. There is one great point of similarity of habit between our common domestic Pigeons and their common ancestor, the Rock Dove, namely, their dislike to perching in trees. I do not mean to say that neither of them ever do so, but that it is a very rare occurrence: as for the common Pigeons I can answer for them that they very seldom perch in trees, as I have not only a good many Pigeons myself, but most of those in the parish pay me a visit every morning, when I am feeding the Wild Ducks and Gulls, to participate in the scramble; but although the place is quite surrounded with trees, the Pigeons always take up their position on the chimneys, the ridge of the roof or the coping of the house, or on the iron railings (on which they never have any objection to perch), and on these places they may be seen all day; but only three or four times in my life have I seen them on the trees. Any one who keeps Pigeons, or has them kept near him, may easily remark this peculiarity for himself, and see how widely the tame Pigeons differ in this respect from the Wood Pigeon, the Stock Dove and the Turtle Dove, all of which both perch and roost in trees. There is also a peculiarity of plumage which has struck me, and

I should be glad to know if anyone has observed the same—namely, that although the common Pigeons assume nearly every possible variety of plumage, from that of the perfect wild Rock Dove, I have never noticed amongst them any bird similar in plumage to the Stock Dove, nearly as that plumage would seem to assimilate with that of the Rock Dove.

I include this species in the list of Somersetshire birds on the authority of my friend the Rev. Murray A. Mathew, who told me that a colony of them had taken up their abode in the cliffs near Weston-super-Mare. I do not know that there is any other record of their appearance in this county, even as occasional visitants.

The nest of the Rock Dove, which is said to be a loose sort of structure, or heap of stalks or small sticks, is usually placed in a hole or crevice in some high rock or cliff, or on a lofty ledge, sometimes deep in a cavern.

The food of this bird, like that of the rest of the family, consists chiefly of various sorts of grain, and also of small seeds, mostly of weeds, and of a great number of roots, particularly those of the mischievous couch-grass (*Triticum repens*). Yarrell adds to this list several species of shell-snails.

The present species is rather smaller than the Stock Dove, and differs from that bird, as has been before observed, in several particulars in its plumage. "The beak is reddish orange, inclining

to brown; irides pale orange; head and neck bluish grey, the sides of the latter shining with green and purple reflections; shoulders, upper part of the back and both sets of wing-coverts French-grey; all the greater coverts with a black bar near the end, forming a conspicuous black band extending outwards and forwards to the edge of the wing; primary and secondary quill-feathers bluish-grey; the tertials French-grey, tipped with black, and with a conspicuous band of black below the black band on the coverts, the light-coloured band on the great wing-coverts intervening between the two dark bands; lower part of the back pure white; rump and upper tail-coverts pearl-grey; tail-feathers twelve, of two colours, the basal two-thirds pearl-grey, with dark shafts, the ends lead-grey; the chin bluish grey; the throat purple and green; breast and all the under surface of the body pearl-grey; under wing-coverts and axillary plume white; legs and toes reddish orange; the claws brown. The females are not quite so large as males, and their colours generally less brilliant. Young birds in their first or nestling plumage, before their autumnal moult, may always be distinguished from the young of the Stock Dove by the broad patch of pure white on the lower part of the back." I have taken this description from Yarrell, as I have not a Rock Dove in my collection, but I may add that some of the tame Pigeons do not differ, even in the most minute particulars, from it.

The egg is plain white, much like that of the Stock Dove.

TURTLE DOVE, *Columba Turtur*. The Turtle Dove is not an uncommon summer visitor in this county: it arrives about the end of April or beginning of May, and departs about October: there is a note in the 'Zoologist' of one having remained as late as the 18th of November. It appears to have two broods in the year, as I have seen one shot on the 1st of September, which could only have just been out of the nest, and I have in my collection one shot on the same day in nearly adult plumage.

The food of the Turtle Dove is much the same as that of the three last-mentioned species, and it is consequently rather mischievous, but as it is by no means so numerous as the Wood Pigeon it does not excite so much indignation.

The nest, like that of the Wood Pigeon, is placed in a tree or highish bush, and is made of sticks, much in the same open loose sort of manner.

The Turtle Dove is easily kept in confinement and will breed: I have known it also, in my aviary, cross with the common white Ring Dove (*Columba risoria*): the offspring of this cross are very pretty neat birds, not nearly so distinctly marked as the adult Turtle Dove, but much more resembling the young birds of the year in their first plumage. There is, I see, a note in the 'Zoologist' for 1865 of the same cross having taken place.

The Turtle Dove has the beak brown; the irides reddish brown; under the eye is a small patch of naked red skin; the head and nape are bluish grey; on the side of the neck are some black feathers, tipped and partially margined with white; the back, scapulars, rump and tail-coverts are bluish grey, a good deal tinged with rusty—nearly all the feathers of these parts are darker in the centre; the wing-coverts are black in the centre, broadly margined with orange-rusty; some of the outside wing-coverts are bluish grey; the quills are dusky, the tertials margined with rusty brown; the two centre feathers of the tail are dusky, the rest dark lead-blue, each feather broadly tipped with white, and the outer web of the outside feather on each side is white—the shafts of all are black; the cheeks and throat are dirty yellowish white; the breast is bluish grey, very strongly tinged with purplish pink; the rest of the under parts are nearly white. Yarrell describes “the young bird of the year up to the time of its leaving this country,” as having “the beak dark brown; the general colour of the plumage of the head and body hair-brown; the back rather darker than the front of the neck; the wing-coverts tipped with buffy white; the flight- or quill-feathers slightly tinged on their outer edges with rufous; belly and under tail-coverts white; flanks bluish grey; tail-feathers above hair-brown, on the under surface blackish brown; the white part

the same as in the adult." I have a young bird of the year in my collection, shot on the 1st of September, which differs from this description, as there is one row of the black and white feathers on the side of the neck making its appearance, and many of the wing-coverts are the same as in the adult.

The bird is the smallest of British Pigeons, and the egg is the smallest of our Pigeon's eggs, but otherwise, like them, quite white.

Family PHASIANIDÆ.

COMMON PHEASANT, *Phasianus colchicus*. The Common Pheasant, as its Latin name imports, is an inhabitant of Colchis, in Asia Minor, and of the country about the river Phasis, whence it was imported into Europe (for there is no native European Pheasant), in very early times, it is said, by Jason and the Argonauts; and it may have been so—at all events, the theory is as good as any other: from Greece it was imported into Italy, and carried by the Romans into many countries in Europe and probably into England, although we do not hear of it here till the reign of Edward the First, in the twenty-seventh year of whose reign (A. D. 1299) the price of a Pheasant was said to be fourpence, of a Mallard three half-pence, a Plover one penny, and of a couple of Woodcocks three half-pence; and Richard the Second's cook, who wrote a sort of cookery-book,

gives a receipt "for to boile Fesant, Ptruch, Capons and Curlew:" this book appears to have been written about A. D. 1381. The Pheasant is also mentioned in the old ballad of the "Battle of Otterbourne," still in Richard the Second's time—about 1388:

"The Faulkone and the Fesante bothe
Amonge the holtes on hee:"

and from that time to this the Pheasant is occasionally mentioned by different writers. Mr. Harting notices it amongst the "Birds of Shakspeare:"

"*Clown*—Advocate's the court word for a Pheasant; say you have none.

Shepherd—None, sir; I have no Pheasant, cock nor hen."

The Pheasant, however, thrives and has thriven in England for a very considerable period, and the climate appears, to a certain extent, to suit it; at the same time I think it may be doubted whether this bird would have lasted so long, or would continue to claim a place among British birds, without the care and attention and occasional food bestowed upon it: a few hard winters and wet springs and summers would reduce its numbers sadly; its numbers certainly could not be kept up to the present battue standard without artificial means; accordingly great quantities are kept tame and bred up like poultry, and merely turned out to be shot: to what an extent this is done in some places may be

gathered from the following anecdote of a great game-preserve, who having a great shooting party, and not finding as many Pheasants as he expected, used some very strong language to his keeper, and told him to go at once to some covert where the great head of game were supposed to be, till at last the keeper could stand it no longer, and said to his master, "You know, sir, as well as I do, it's no use going there yet; the train isn't in and the birds haven't arrived."

The Pheasant has now a very wide geographical range, as it has been imported into Australia, where it appears to flourish and to have attained to considerable numbers.*

The natural food of the Pheasant consists of grain of all sorts, seeds of various plants, berries, worms and grubs, and (especially for the young birds) ants and ants' eggs. Various artificial foods are advertised and sold, all of which profess to be more or less certain specifics against gapes and all other diseases to which the young birds are liable; but any account of these or their relative value does not appear to me to come within the limits of these notes.

The nest of the Pheasant is generally a mere hole scraped in the ground, under cover of some low bush or long grass, or standing corn.

The Pheasant is too well known, and too easily

* See 'Zoologist' for 1863, p. 8493.

met with in any poulterer's shop, to need any description. I would merely say that the present species, *Phasianus colchicus*, has no white whatever in its plumage, and that all the white and pied birds so constantly met with are merely chance varieties, or the effect of some cross, probably with the next-mentioned species. The buff or cream-coloured variety, often called the "Bohemian Pheasant,"—to which name it has no more right than Shakspeare to his "sea coast of Bohemia,"—is a rather curious variety, all the markings of the feathers being visible, but all very pale and faint, and the same buff hue pervading the whole bird, except the neck, which retains the original green, but even that is paler and not so glossy: this variety appears to occur both to the present and the Ringnecked species. Very old hens, and hens which (either from accident or malformation) are incapable of breeding, often assume a plumage nearly similar to that of the male.

The egg is of a perfectly plain colour, without any spots—a sort of pale olive.

RINGNECKED PHEASANT, *Phasianus torquatus*. This appears to be a distinct species, and to inhabit a different tract of country. Cuvier says of it, "China has lately furnished us with three other species, one of these, *Phasianus torquatus*, scarcely differs from the common species, except in having a brilliant white spot on the side of the neck." Yarrell and Montagu both appear to consider this a distinct

species, although Yarrell, "for want of space," gives no separate history of it: it appears to me, however, to be a distinct species, and therefore to require a notice as much as other nearly allied and similar species.

The Ringnecked Pheasant was very many years later in its introduction into England than the former species. Montagu, who wrote his 'Dictionary' in 1802, says it was first introduced by the late Duke of Northumberland, but he does not give the exact date. It now appears to be almost as common as the other species, and to have been so frequently crossed with it that, in England at least, it would be impossible to separate the species, or to rely upon getting either of them genuine.

In food and habits the two species are quite similar, and the only distinction in plumage is the white ring, or rather half-circle (for I think it never quite joins in front), and perhaps a greener hue on the long hackles of the rump. The females appear to be quite the same, although I have heard keepers say they can distinguish the two.

The egg also is like that of the last species.

Some other species have lately been introduced into England, but have not yet been long enough in the country, or become sufficiently established, to claim a place amongst British birds. This system of crossing appears to me to be mischievous, as

likely to destroy the pure breed, and to substitute all sorts of white, pied and spotted varieties.

Family TETRAONIDÆ.

Of the Grouse* we can probably claim only one species for Somersetshire, out of the six that have now found a place in the British list.

BLACK GROUSE, *Tetrao tetrix*. The grand old "Black Cock" is still, and I hope will long continue, tolerably plentiful in such parts of the county as are suited to its habits. On the Quantock Hills it is tolerably numerous, and still more so on the wilder hills to the westward around Dunster, Dulverton and Dunkery Beacon, although to a certain extent it has been interfered with and its range partially curtailed by mining operations and enclosures. It likes the open heather and woods bordered by and interspersed with open spots of heather and whortleberry plant, the tender shoots and fruit of which plant form a very favourite portion of the food of this bird; berries also, such as bilberries, cranberries, juniper and hawthorn berries, some seeds, the tender shoots and leaves of heath and heather, and of some trees, such as the birch, beech, hazel, willow and poplar:† insects also may be added to

* As to Sand Grouse, see Preface.

† Meyer's 'British Birds,' vol. iv., p. 78.

the bill of fare, and if there are any corn-fields within its reach it will repair to them to feed upon the grain. In the winter, Yarrell says he has found their crops distended with the tips of the most recent shoots of pines and firs. They do not appear to pair, but the males or Black Cocks in the breeding-season resort to some elevated and open spots, where they may be heard morning and evening repeating their call-note to the females, or "Grey Hens," as they are called.

The Grey Hen places her eggs on the ground without much nest, but under cover of some tall and thick heather or fern, and to her is left the sole care of the eggs and young birds after they are hatched.

The Black Grouse has been known to cross with the Pheasant, Capercaillie, Red Grouse and Ptarmigan.

An old Black Cock in full plumage is a fine handsome fellow, the general colour of the plumage being a beautiful glossy blue-black, with a few conspicuous white spots; the beak is black; the irides dark brown; there is a spot of rough skin over the eyes of a bright scarlet colour; the head, neck, breast, back, rump and tail-coverts are a beautiful glossy blue black; the wing-coverts are brownish black, but not quite so glossy; there are a few white feathers on the shoulder making a conspicuous white spot; the primary quills are brownish,

with white shafts to the feathers, the secondaries brownish black at the ends and white towards the base; the white showing beyond the greater wing-coverts makes a conspicuous bar on the wing—this white bar is easily seen at a distance when the bird is flying; the tail is much forked, glossy black, the longest of the feathers much curved outwards on each side; the belly and flanks are glossy black; the under wing and tail-coverts are white; the legs are feathered down to the junction of the toes; the toes (not feathered as they are in the Red Grouse and the Ptarmigan) are of a blackish brown colour; the claws are shining black. As I have not a Grey Hen in my collection I have taken the following description from Yarrell:—"The beak is brown; irides hazel; the general colour of the plumage pale chestnut-brown, barred and feathered with black; the dark bars and spots larger and most conspicuous on the breast, back, wings and upper tail-coverts; the feathers of the breast edged with greyish white, particularly in old birds and in those from northern latitudes; under tail-coverts nearly white; feathers on the legs pale yellow-brown; toes and claws brown." The young birds are at first much like the females, but by the 1st of September (at which time Heath Poult shooting commences in these parts and in the New Forest) the young males have many black feathers mixed with the brown ones, which gives them a very curious mottled appearance.

The eggs are of a pale yellow-brown ground colour, spotted rather thickly with darker reddish brown spots.

PARTRIDGE, *Perdix cinerea*. The Partridge is pretty common throughout the county; in good breeding seasons indeed it is very numerous, but a cold hard late winter and a wet spring and summer make all the difference in the sort of sport to be expected in September; but if they are fairly treated and not shot too closely down in the bad seasons there generally seem Partridges enough left to keep up the numbers, which would hardly be the case with Pheasants without artificial help. Very moderate game-preserving indeed seems to be sufficient to keep up a good stock of Partridges: if the keeper only takes care to keep down the quadruped vermin, which are the most destructive, such as cats, stoats and polecats, and can keep the birds from the net of the poacher,—for the net seems the only very destructive way in which Partridges are poached,—he will have very little other trouble, as these birds will generally find food for themselves: this consists mostly of grain of various kinds, wheat, barley and oats, the seeds of various weeds, and a few insects and worms; ants and their eggs form the favourite food of the young, and indeed in bringing them up by hand this food seems almost necessary.

The nest is a slight hole scratched in the ground, and the eggs, which are numerous, are usually

hatched by the end of June, but occasionally they are much later. There is a note in the 'Zoologist' of a brood being hatched as late as the 1st of September, but such an extreme case as this must be in consequence of some accident having happened to the first nest or brood, and consequently a second nest has been made.

The Partridge is too well-known, and too often seen both alive and at poulterers' shops, to need any description. I may mention, however, that varieties occasionally occur: I saw a pied one at Mrs. Turle's shop that had been shot at Lord Taunton's, and one is described in the 'Zoologist' for 1864 as being marked precisely the same as an ordinary bird, but the colouring was many shades paler throughout and inclining to a buff or creamy tint: this is exactly the same sort of variety as the so-called "Bohemian Pheasant," and is not an uncommon variety in many species: I have seen it occur in a Hedgesparrow, a Woodcock, and a Snipe, as well as in the Partridge and Pheasant.

The egg of the Partridge is like that of the Pheasant in colour and shape, but is of course considerably smaller.

QUAIL, *Coturnix vulgaris*. This little miniature Partridge occasionally occurs in the county, sometimes in considerable numbers. Although generally considered a migratory species,—on the continent of Europe it migrates in immense numbers, arriving

from Africa in the spring on its northern journey and returning again in the autumn,—it would nevertheless appear to be at least partially resident in England. I have myself found it, or had quite recently killed specimens sent me, in the months of September, October and December; and there are notices in the 'Zoologist' of its occurrence in the months of January, February, June, August and November, and both its nest and eggs and the young birds have been frequently found in various counties.

This appears to be the bird with the flesh of which the Children of Israel were fed in the Wilderness when they lusted for flesh. The flesh of the Quail is still much esteemed, and numbers are brought from France and fattened by the London poulterers for sale; but, according to Yarrell, it does not appear to be very wholesome food, especially if eaten in too great quantities: he says, "From some experience I consider the Quail very heating food," and the Children of Israel appear to have found the same thing.

The nest, like that of the Partridge, is merely a hole scraped in the ground, lined with a few bents of grass or straw: it is generally placed in a grass or corn-field.

The food of the Quail is much the same as that of the Partridge, consisting mostly of grain and seeds and occasionally a few insects.

In general colouring its plumage somewhat resembles that of the Partridge. The beak is brownish grey; the irides hazel; the head is barred with two shades of brown, there is a narrow streak of very pale whitish brown through the centre of it, and a broadish streak of the same colour from the base of the upper mandible over the eye and ear-coverts; under the eye to the ear-coverts is spotted pale and dark brown; the ear-coverts are dark brown; the sides of the neck are pale whitish brown, streaked with three irregular rows of dark brown spots; the back, scapulars, rump and tail-coverts are spotted with two shades of brown, one very dark and one light yellowish brown, each feather being transversely barred with pale brown and having a conspicuous streak of the same down the centre, broadest at the base; wing-coverts yellowish brown, irregularly marked with pale and dark brown, and with a very narrow light streak on the shafts of the feathers; the quills are dusky brown, irregularly marked with pale brown; the tail-feathers are barred with pale and dark brown; the throat is very pale whitish brown; breast yellowish brown, spotted with dark brown, with a white streak on the shaft of each feather; the flanks are irregularly marked yellowish and dark brown, with a very broad pale streak in the centre of each feather; the belly and under tail-coverts are yellowish white. This description is taken from one killed in January, a young bird of the year.

The adult male differs in having two half circular dark brown bands down the sides of the throat from the ear-coverts, and has a black patch at the bottom of the bands on the front of the neck; there are no spots on the breast; the legs, toes and claws are pale brown.

The eggs are of "a yellowish or dull orange-coloured white, blotched or speckled with umber-brown." *

As far as Somersetshire is concerned this finishes the Rasorial Order. I have tried in vain to find any record of the Struthionidæ or Bustards, although I should think the Great Bustard at all events must have occurred on some of the open ground on the top of the Mendips between Bath and Wells and along the Wiltshire boundary.

ORDER GRALLATORES.—*Family* CHARADRIDÆ.

The numerous Order at which I have now arrived—the Grallatores, Stilted birds, or as they are more commonly called, "Waders,"—leads us to rather different scenes, for instead of the hedge-rows and corn-fields, gardens, plantations, shrubberies and old buildings, where we have had to seek for the

* Yarrell, vol. ii., p. 415.

homes of most of the various species that have hitherto claimed our attention, we have now to betake ourselves to the ooze and mud, for which the greater part of our coast line is notorious,—to the soft and muddy banks of our rivers, streams and ponds,—to the swamps and bogs of the Brendon and other wild hills, and especially to the great turf-marshes which form so large a portion of a certain district of our county. The present Order is a much larger one in point of number of species than the last, including as many as seventy-three British species, out of which forty-two may be considered as belonging to Somersetshire. The Charadridæ or Plovers are the first family which I have to notice : of these eight species out of the fourteen British may be considered Somersetshire : some are very numerous, but mostly irregular and fitful in their appearance, depending very much on the state of the weather.

GREAT PLOVER, *Ædicnemus crepitans*. The Great Plover, Norfolk Plover, Stone Curlew, or Thickknee as it is also called, seems occasionally to have occurred in this county. There is one in the Museum at Taunton amongst the birds in the collection formerly belonging to the late Mr. Beadon, of Otterhead, and there is an entry in his note-book saying it had been shot at Brown Down in the winter of 1828 : this would appear to be rather an odd time

for the occurrence of this bird, which is generally a summer visitor to England, arriving here in April and departing in September or October. It would appear, however, occasionally to make an earlier appearance, for the one in my collection was sent to me in the flesh from Exmouth on the 23rd of March, and had been killed at that place the day before. Montagu also mentions one having been killed in the South of Devon still earlier, namely, in February. Mr. E. H. Rodd says ('Zoologist' for 1866), that he has never known this bird taken in the Land's End district in the summer, but that it is not unfrequently obtained there in the winter, which he attributes to the latitude of the Lizard and the Land's End being about the same as the northern boundary of this species in its continental winter quarters.

As far as this county is concerned I have only heard of one appearance of this bird besides the one above mentioned, and that was some years ago in the neighbourhood of Ilminster, but I have been able to glean no particulars about it. It has, however, occasionally occurred in the neighbouring county of Dorset, as well as in that of Devon.

The food of the Great Plover appears to consist of worms, insects and their larvæ, small snails and slugs. Yarrell says they are also believed to kill small Mammalia and small reptiles, for which their stout frame and large beak seem sufficiently powerful.

They make no nest, but the eggs are deposited on the ground, the hen bird merely scraping a small hole in the sandy dry ground chosen.

The Great Plover is considered the largest of the British Plovers, nearly equalling the Curlew in size. The beak is black at the point, light greenish yellow at the base; irides bright golden yellow; from the beak to the eye, a streak under the eye and a patch over the eye, white; top of the head and back of the neck narrowly streaked very dark brown, almost black, and pale yellowish brown; there is a streak of the same colours from the base of the lower mandible under the white streak above mentioned to the side of the neck; the feathers of the back, scapulars, tertials and upper tail-coverts dull brown, with a streak of very dark brown at the shafts; most of the feathers appear to have been margined with very pale yellowish or whitish brown, but the margins in my specimen are very much worn; the lesser wing-coverts are the same, except that one row of them is rather broadly marked with white, making a conspicuous bar of that colour across the closed wing; the greater coverts have the same dark streak in the shafts of the feathers, but the rest is more of a dull smoky grey; the primary quills are almost black, the first and second have a white patch towards the end; the centre tail-feathers are dull smoky brown, the others are mottled with two shades of brown at the base, the middle is white and the ends black;

the outside feathers are shorter than those in the middle, making the tail a sort of wedge-shape; the chin and throat are white; breast and flanks nearly white, tinged with pale yellowish brown and streaked with dark brown; vent and under tail-coverts rather paler and without streaks; the legs and toes are yellow; the claws black. In this bird, as in all true Plovers, there are three claws in front and none behind; a few species, however, have a more or less distinctly developed hind toe. In the young birds the markings are less distinct.*

The eggs are pale clay-brown, blotched, spotted and streaked with ash-blue and dark brown.†

GOLDEN PLOVER, *Charadrius pluvialis*. The Golden Plover is tolerably numerous in various parts of the county, but is generally only a winter visitor, although a few are said to breed in the wild country near Dunkery Beacon and Exmoor; in the more northern counties of England, and in Scotland, it breeds plentifully. In hard weather in the winter, when they are driven from the hills, they come down into the meadows in the Vale, especially if they are much flooded and not frozen: sometimes they remain in such situations until quite late in the spring: in the year 1865 I noticed them as late as the 30th of March, when many of them had nearly attained their summer plumage; one which I then obtained for my

* Yarrell, vol. ii., p. 469.

† Id., p. 467.

collection was indeed in almost perfect summer plumage. This curious change of plumage appears to be produced partly by a mere change of colour in the feathers, and partly from moult and a fresh growth of feathers. In a note by Mr. Cordeaux on this subject, in the 'Zoologist,' he says that on examining a bird killed in April he found but little change of plumage, but on pulling out the white feathers the young crop appeared underneath, just bursting out from their blue sheaths; there did not, however, appear to be a sufficient growth of these new black feathers to make up the full summer plumage: probably the deficiency is made up by many of the white feathers being changed by the black pigment: he continues, "In the bird examined a considerable portion, at least two-thirds, would have been entirely new feathers."* In my specimen the colouring process seems to be the most general, as many of the feathers are in process of change, being a sort of dull dusky, more or less margined with white, and the change appears going on much as it does in the series of Linnets before mentioned. Some of the feathers on the upper parts also appear to be changing in a similar manner, and to be receiving a brighter and more decided colouring.

The nest of the Golden Plover is generally a very slight affair,—a mere hole in the ground, with a few

* 'Zoologist' for 1865, p. 9574.

bents twisted round it,—but occasionally a more elaborate structure is produced.*

The food of this species appears to be tolerably varied: it consists mostly of worms, small beetles, slugs and insects, vegetable matter and berries of heath plants.† In hard frosty weather the Golden Plovers resort to the sea-coast, where they feed on the grubs and insects to be picked out of the sand and mud, and on these occasions they are not such good eating as when they feed more inland.

The plumage of the Golden Plover with which we are best acquainted is as follows:—The beak is nearly black; the irides brown; the head, neck, back, scapulars, rump, wing and tail-coverts and tertials are dark brownish black, spotted with yellow; the sides of the throat are streaked with the same colours; the primary quills are dusky, with very slight tips and edges of dull dirty white; the chin and throat are white; the breast is spotted the same as the upper parts, but not nearly so distinctly; the belly and under tail-coverts are white; the flanks are barred with dull dusky. In summer the upper parts become brighter and more distinct, the dark parts getting almost black and the yellow much brighter; the throat, breast and all the under parts are then black, bordered all round with a little white. The

* 'Zoologist' for 1864, p. 9230.

† Meyer's 'British Birds,' vol. v., p. 170.

legs, toes and claws are nearly black. The young birds of the year are brown, with yellow spots on the upper parts, both colours being strongly mixed with greyish ash.

The egg is pear-shaped, a sort of olive-brown, spotted with dark brown; but the eggs are subject to considerable variety, as will appear by the following note of Mr. Saxby's in the 'Zoologist' for 1863, p. 8725:—"The general rule appears to be that those eggs which are laid early in the season have a dingy hue, the ground colour being strongly tinged with dull olive-green, and that a little later this commences gradually to become less frequent, giving place to creamy white, sometimes tinged with warm yellowish brown; the latter colour is more frequent in June and July, when the breeding season is drawing to its close. At this time the spots and blotches are very abundant, and more of a reddish brown."

DOTTEREL, *Charadrius morinellus*. This is a tolerably regular summer visitor to some of the more northern counties, but is not a very well-known species in this county; it is more common, however, both in Wiltshire and Dorsetshire. It has probably been known to breed in this county, as Yarrell says, "The Dotterel is said to breed on the Mendip Hills in Somersetshire;" and Montagu says, "A person of credit who frequents the Mendip Hills declares that they breed there, and that he has taken their eggs."

Young birds are frequently shot, early in September upon these hills." * The species appears now to be getting scarce even in its more favourite counties: this is probably owing to the unsuspicious disposition of the bird, which allows of a very near approach without taking alarm; consequently it is easily shot, and as some of its feathers are much sought after by fishing-tackle makers there is something to be made by shooting it. As I have often been asked what bird it is that is so intent on imitating the actions of its pursuers that it will let them get quite close to it whilst so engaged, I quote the following lines from Drayton's 'Polyolbion,' as they are applicable to the subject, and have been before quoted by Yarrell:—

"The Dotterel, which we think a very dainty dish,
Whose taking makes such sport as no man more could wish,

* I am able to mention a more recent occurrence of the Common Dotterel, for the Rev. Murray A. Mathew, writing to me from Weston-super-Mare on the 7th of May, 1869, says, "Having received information that a strange bird had been shot on the Steep Holm, I went this morning to its possessor to ascertain what it was. I was told that the bird had been shot flying about in company with Swallows, and from the description given me of its plumage I felt very hopeful that it would prove to be a Collared Pratincole. However, it turned out to be only *C. morinellus*. Other Dotterel were seen near this place, but I have not heard that more than this single example were shot."

For as you creep or cower, or lie or stoop or go,
So marking you with care, the apish bird doth do,
And acting everything, doth never mark the net,
Till he be in the snare which men for him have set."

The Dotterel is said to deposit its eggs on the ground without any nest, merely a hole in some dry ground under cover of some vegetation, and generally near a moderately-sized stone or rock: the tops of high hills or mountains are the favourite breeding localities: on many of the mountains in the Lake District they appear at one time to have been numerous during the breeding-season, and Yarrell gives a list of these mountains, but they must now be getting scarce even there, for Mr. Cordeaux, in some interesting notes on the Ornithology of the English Lakes,* speaking of the Dotterel, says, "All endeavours to find these birds have been unavailing. I have walked upwards of one hundred miles over these hills, the greater portion of this distance being very likely Dotterel ground, without either seeing or hearing any." I have myself also walked over most of the mountains mentioned by Yarrell as favourite breeding-grounds with the same result as Mr. Cordeaux. I may add that I have been equally unfortunate on the Mendips.

The food of the Dotterel is said to be chiefly insects and their larvæ, worms, beetles, small

* 'Zoologist' for 1867 (Second Series, p. 870).

grasshoppers, and sometimes a little vegetable matter.

The adult bird in its summer plumage has the beak nearly black; the irides brown; the top of the head and nape of the neck very dark brown, rounded on the sides and behind by a band of pure white; the ear-coverts, the neck and back ash-colour; the scapulars, wing-coverts and tertials ash-brown, edged with buff; wing-primaries ash-grey, the first with a broad white shaft; the tail-feathers greyish brown; those in the middle tipped with dull white, the three outside feathers with broad ends of pure white; the chin and sides of the neck white; the front and sides of the neck below ash-grey; from shoulder to shoulder across the breast is a band of white, margined above and below with a dark line; breast rich fawn-colour, passing to chesnut; belly black; vent and under tail-coverts white, tinged with buff; under wing-coverts and axillary plume greyish white; legs and toes greenish yellow; claws black. This description is taken from Yarrell, as I have not one in my collection. The male and female appear to be much alike. Mr. Cordeaux, in the 'Zoologist' for 1867 (Second Series), says, "I believe the late Mr. Wheelwright is quite correct when he says 'the female is generally larger and handsomer than the male.' Montagu says that 'in the female the white line on the breast is wanting.' This is not the case, however; both the male and

female have the white belt across the breast, but in the female it is less distinctly marked."

Of the egg Yarrell says that one in his own collection is of a yellowish olive colour, blotched and spotted with dark brownish black: they are rather smaller than those of the Golden Plover, as is the bird.

RING DOTTEREL, *Charadrius hiaticula*. The pretty little Ring Dotterel, or "Ringed Plover," as it is also called, is very numerous all along our Somersetshire coast, certainly contradicting the assertion of Meyer* that "on muddy or marshy shores it is never seen:" had he only paid a visit to the mud of Burnham and Watchet, and seen the hundreds of Ring Dotterel there feeding with the Purres on mud so deep and soft that if you shot one on it you could not go to pick it up, nor would any amount of beer tempt your boatman to try, he would hardly have made such a statement with regard to this bird. Of the Sanderling it may possibly be true, as I have never seen one on our muddy coast, or received a Somersetshire specimen, though I have received specimens from Braunton Burrows, in North Devon, which, though not very far off, is without any of our mud; and on the South Devon coast, the three species, Purre, Sanderling and Ring Dotterel, are nearly equally common; but there they have their choice of sand or mud, and

* Meyer's 'British Birds,' vol. v., p. 182.

the Ring Dotterel and Purres certainly appear to say, "The mud for us."

In the summer the Ring Dotterel does not appear to be quite so numerous as in the winter, so there is probably a partial migration north ward in the summer, or at all events a dispersing in search of favourable nesting-places.

The nest, is a mere hole scraped in the ground amongst small pebbles, generally near the sea, but not always, as the nest has been found a considerable way inland; a perfect nest, it is said, "consists of a saucer-shaped hollow scraped in the ground and lined with small stones, which are sometimes so thickly piled around the sides that the eggs are sometimes found standing almost perpendicularly upon their small ends."*

The food of the Ring Dotterel consists of worms, shore-worms, grubs, small beetles, insects and their larvæ, shrimps and sand-hoppers. Mr. Harting, writing in the 'Zoologist' for 1863 of the birds of the Kingsbury Reservoir, says of this species, "The stomachs of all I have examined contained either the remains of small beetles and worms or a mass of semi-digested vegetable matter, sometimes both, and invariably small particles of sand or gravel."

The adult Ring Dotterel is a very pretty bird, and is easily distinguished from the other birds of the

* See 'Zoologist' for 1864, p. 9127.

same size with which it associates, in consequence of the very distinct black and white markings about the head and breast. The beak is black at the tip, orange-yellow at the base; the irides brown; just over the beak, from thence under the eyes to and including the ear-coverts, is a distinct black band; the forehead is white; over the white from eye to eye is another black band, and behind the eye a small patch of white; top of the head greyish brown; chin, throat, sides of the neck and a small streak round the back of the neck white; under this small streak of white is a smaller streak of black extending to the breast, which is black: back, scapulars, rump, tail and lesser wing-coverts greyish brown; the greater wing-coverts are the same colour, but tipped with white, which, with some white near the base of the primary quills and a few of the exterior tertials (which are white also), makes a conspicuous band of white across the open wing; the rest of the quills are dark dusky, nearly black; the tertials nearest the back are nearly the same colour as that part, but perhaps a shade darker; the two centre tail-feathers are dusky towards the tip, except a very small spot of dirty white at the tip, the base inclines more to the colour of the back; there is a distinct white spot on the tip of the next feather on each side, and the white occupies a greater space on each feather towards the outside; the outside feathers quite white; belly and all the rest of the under parts pure

white; legs and toes orange; claws black. The young bird of the year has the white forehead and patch at the back of the eye; the streak under the eye and the ear-coverts are brown; there is no black band on the top of the head; the streak of black under the white at the back of the neck is just hinted at by being a shade or two darker than the back; there is a light brown patch on each side of the breast, but it is not continuous like the black breast of the adult, the centre of the breast being dull dirty white; the beak is black; the legs and toes pale yellow. I have in my collection one very young Ring Dotterel which was picked up alive at Watchet: it is in its down plumage; the top of the head and the back are a sort of brindle yellowish and dark brown; all the rest dull white.

The egg, which is very large for the size of the bird and pear-shaped, is a pale yellowish drab, much spotted with very dark brown and dull dusky.

GREY PLOVER, *Squatarola cinerea*. This bird, which differs from the true Plovers in having a hind toe, small and rudimentary though it is, is a much more decided shore-bird than the Golden Plover, always feeding on the mud and ooze of the sea-shore or of some tidal river, but rarely if ever having resort to inland feeding-grounds. It is by no means such good eating as the Golden Plover, in consequence probably of the different locality in which it seeks its food. It is a rather numerous winter visitor to

our muddy shores, not, however, remaining to breed, although it occasionally stays long enough to have nearly, if not quite, assumed its summer plumage.

The food of the Grey Plover consists of marine insects, shore-worms and small shell-fish, which it finds on the mud. Meyer adds to this "worms, beetles and their larvæ, which it finds on meadows and wastes." I have never myself seen this species except on the mud; it may, however, and probably does, retire to such places during high spring-tides, when its usual feeding-places are under water.

The accounts of the nest of the Grey Plover seem to be from high northern latitudes, and these accounts are very meagre.

The young birds of the year very much resemble the young of the Golden Plover: I saw some at Teignmouth in November, in the poulterers' shops, that, looking at them across the street, you could hardly identify, and I dare say the poulterer sold them for Golden Plovers; still on a closer inspection they may always be identified by the hind toe and by the axillary plume,—that is, the longish feathers immediately under the wing, where it joins the body,—which in this species is black at all ages.

The plumage in which the Grey Plover most frequently occurs is its ordinary winter plumage, which is as follows:—The beak is black; irides dark brown; just over the beak is white, rest of the head and nape light dusky, each feather narrowly

edged with white; there is an indistinct light streak over the eye; ear-coverts dull light dusky; back and scapulars lightish dusky, each feather tipped and edged with white; the lesser wing-coverts have more white on them; the greater wing-coverts are light dusky, regularly margined with white; tertials dusky, marked with dull dirty white and white; the rest of the quills nearly black, with white shafts to the feathers; rump and tail-coverts white, with a few dark dusky markings; tail barred black and white; chin white; throat and sides of the neck spotted with dull dusky and white; breast lighter, but marked nearly like the back; rest of the under parts, except the axillary plume (which is always black), white; legs, toes and claws black. This description is taken from one shot in the middle of January. Another shot at Burnham, in December, has the markings on the back more distinct, nearly black and white, but the white occasionally mixed with yellow; there is not so much light dusky on the breast, the feathers being only streaked in the centre with that colour; the feathers on the flanks have very narrow light dusky streaks in the centre. From the yellow mixed with some of the white markings this would appear to be a younger bird than the one first described. The breeding-season plumage differs in having the front and sides of the neck, the breast and belly, black; the markings of the upper parts are more distinctly black and white.

The eggs are said to be "oil-green, spotted irregularly with different shades of umber-brown, the spots crowded and confluent round the obtuse end."*

PEEWIT, *Vanellus cristatus*. The Peewit, "Lapwing" or "Crested Plover," as it is called, is at times very common throughout the county, making its appearance in autumn, winter and spring; in some parts, indeed, such as the Brendon and Exmoor Hills, it remains to breed, but not in very great numbers. Flocks of Peewits spread over the cultivated lands in the Vale when driven from the hills by frost or snow: a very hard frost, however, drives them even from these parts to the sea-shore, or some unfrozen part, for food. In open weather they visit the ploughed fields and young wheat in search of food. It is a very pretty sight to watch a flock of these birds, if one can stalk up near enough to have a good view of them, as their motions on the ground are very elegant, and they have a habit of constantly elevating their crests when running from place to place, which they do very quickly.

The Peewit seems more to agree with the Golden than with the Grey Plover in its choice of a feeding-ground, seldom seeking the actual mud on the coast, unless driven from its more favourite haunts by hard frost.

* Yarrell, vol. ii., p. 297.

As may be supposed from the localities it frequents, the food of the Peewit consists principally of worms, grubs, slugs and insects; consequently it is amongst the very few feathered pets of the gardener, and is often kept tame in his garden, and when once tamed it becomes very tame, although naturally a very wild bird and difficult of approach.

The nest, like that of others of the family, is a very slight affair—a mere hole in the ground, with a few bents of rough grass twisted round it. In some counties, where Peewits breed in large numbers, the eggs are collected and sent to London, where they form a standing dish at ball suppers and wedding breakfasts, and other such like occasions; but when Plovers' eggs fail I believe Rooks' eggs are often made to take their place, and when prettily done up in moss the difference is not noticed, especially by the unlearned in such matters.

In plumage the Peewit is a very handsome and peculiar-looking bird, but it is too well known to need more than a very general description. The beak is black; the irides hazel; the top of the head dark green, almost black; from the back of the head springs a crest consisting of several very long narrow dark green feathers; there is a white streak over the eye and a black one under it; the cheeks and sides of the neck are dullish white, just tinged with rusty brown and streaked with black; nape rusty brown and dirty white and black; back, scapulars and ter-

tials green, glossed with purple and bronze reflections (in some specimens these feathers are slightly margined with dullish white—probably these are young birds of the year); the rump darkish green, glossed with blue; the tail-coverts chestnut; wing-coverts dark glossy green; the primary quills are black, with a longish dull white spot near the tips of the first four; the tail-feathers are white at the base, black towards the tips (between the black and the white, in some specimens, is an irregular chestnut marking); the outside feather on each side is nearly all white; the chin and throat are white in winter and black in summer; the breast is black; the belly and flanks white; under tail-coverts chestnut, but paler than the upper; legs and toes brownish orange; claws black. This bird has a rudimentary back claw. The young birds of the year do not vary much, except that the feathers are margined with dull white or buff. Varieties occasionally occur: Yarrell mentions white, cream-coloured and mouse-coloured: a very curious variety is mentioned in the 'Zoologist' for 1865, at p. 9497, in which the head and neck were of the usual colour, some of the primaries white and others mottled; the tail the usual colour, excepting one feather, which was white; nearly all the rest of the plumage was white.

The egg is pear-shaped; of a pale olive-brown ground, much spotted with dark brown.

TURNSTONE, *Streptilas interpres*. I scarcely know why this bird has been included in the Plover family, as it decidedly differs from them in two material respects: the beak is not at all like that of the true Plovers, but sharp-pointed and wedge-shaped, and it has a very well-developed hind toe, but this is placed rather on the inside of the leg than straight behind, as is the case with most birds. It is a tolerably numerous species along our shores in winter, but I do not know that any remain to breed here, though they appear to be found occasionally at all times of the year. Mr. Haddon, of Taunton, has one full-plumaged bird in his collection, which was brought alive to him on the 1st of June; it had just been caught at Stolford, near Burnham; and there is a note of a bird, probably a Turnstone, having been shot at Weston-super-Mare, in July, 1862,* but the description of the bird there given is scarcely sufficient to enable one to identify it with any certainty. These are the only instances I know of its having been taken in this county in the summer; but I have seen them in Guernsey, and killed one in beautiful plumage, in July. Yarrell says they retire to the North to breed in May, and return to this country with their young brood in August.

The favourite place of resort of the Turnstone appears to be the rough stony parts of the sea-shore,

* See 'Zoologist' for 1864, p. 9362.

where rough stones, mud and sea-weed are mixed : in these places it seeks its food by turning over the smaller loose stones, shells and sea-weed, in order to capture the insects and small shell-fish that may be concealed under them ; and for this work the beak is admirably fitted, but it is much too short for boring in the mud, as so many sea-side birds do.

Meyer says the nest—which is little more than a shallow depression, sparingly lined with a few bents of grass—is usually placed under shelter of some plant, stone or abrupt corner ; at other times on the bare sand or small broken stones.

I have given the description of the Turnstone in three different states of plumage, as there seems to me to be some little doubt about the changes it goes through. Yarrell says nothing about summer or winter plumage, yet all the winter-killed specimens I have ever seen resemble the last-described bird, and they can scarcely all be young birds of the year ; if so, what becomes of the old ones during the winter ? In the full plumage it is a very richly-coloured handsome bird : the beak is black ; the irides dark brown ; the crown of the head and nape are white, spotted with black ; a streak over the eye, the ear-coverts, the side of the neck and a spot between the eye and the beak are white,—this white spot is surrounded by black ; the chin and throat are white ; the breast and a collar round the neck, and a streak which reaches to the black surrounding

the white spot near the beak, black; there is a small white spot on the side of the breast, just beyond the point of the folded wing, and a very narrow white streak round the back of the neck; the back and scapulars are rich glossy black, with a few bright bay feathers intermixed,—some of the scapulars are slightly margined with white, but the margins appear wearing off; the lower part of the back is pure white; there is a band of black on the rump; the upper tail-coverts are white; the tail-feathers are nearly black, with a little white at the tips,—the outside feathers on each side are nearly all white; the wing-coverts are broadly margined with rufous, and are black (or very dark brown) in the centre; some of the wing-coverts close to the body and the tips of the greater coverts are white; the quills are dusky, with white shafts; the belly, flanks and under tail-coverts pure white; the legs and toes very bright orange-red; the claws black. This is the description of the bird shot by myself in Guernsey in July, and agrees almost perfectly with Mr. Haddon's bird previously mentioned. Another specimen, also killed at Stolford, and given to me by Mr. Haddon, is in a transition state: it has the head and neck dark dusky brown, speckled with white; the back and scapulars dusky brown, black and bay mixed; the wing-coverts almost entirely dusky brown, with a very little bay and rufous appearing; chin and throat white, with a few black feathers; breast black, dusky

and dull white mixed; the rest of the bird as in the former. Another shot in the winter has a small white spot on the forehead; the space between the beak and the eye dull hair-brown; head and nape dull hair-brown and black mixed, but no white; the margins of the lesser wing-coverts have more rusty in them than the last; the chin and throat pure white; the breast is black, a few of the feathers slightly margined with white; the rest of the bird as in the first mentioned.

The eggs, when fresh, are said to be greenish olive in colour, marked with spots and streaks of dark ash-colour and olive-brown or black.*

OYSTERCATCHER, *Hæmatopus ostralegus*. The Oystercatcher, or "Sea-pie," as it is always called by the sailors,—perhaps more properly, for "Oystercatcher" is certainly a misnomer, though I have no doubt it would deserve the name if it could,—is common all along our coast, and may at times be seen in flocks of many hundreds: it is resident throughout the year, and breeds in places suited to it. The eggs are generally deposited on some shingly beach, or under any rough grass, just above high-water mark. I have known it breed, however, amongst the rocky parts of the shore of Guernsey, though not in the numbers it does on the lower parts.

* Meyer's 'British Birds,' vol. v., p. 125.

The food of the Oystercatcher does not, as is generally supposed, consist of oysters, but of shell-fish generally; oysters no doubt amongst the number, if it can catch them, but they are generally in too deep water to give the bird a chance, as it does not seek its food by diving; mussels, shrimps, limpets (which it detaches from the rocks with its powerful beak), worms, shore-worms and marine insects make up its bill of fare. Dr. Saxby* says it carries its shell-fish to some convenient spot before it eats them, just as the Thrush carries its snails to a stone to break them, and that in such spots the shells accumulate in considerable numbers. It does not appear to me to do much feeding during the day, but to sit quietly on the rocks, either pluming its feathers or half asleep, but always with one eye open, as anyone will find who tries to get a shot at it. Although naturally a wild bird and difficult of approach, it is easily kept in confinement, and becomes very tame, especially if taken when young. It is considered a useful bird in the garden, as it eats snails and worms, and failing these it may be fed on bread, meat, cooked vegetables and rice. It swims easily, but I do not know that I have ever seen it take to the water of its own accord, but if wounded it will swim very well and dive a little.

The Oystercatcher is a fine handsome bird, and

* 'Zoologist' for 1865, p. 9590.

very conspicuous, owing to its decided black and white colouring. The beak, which is long and strong, is deep orange; irides crimson; the head, neck, breast, back, scapulars, lesser wing-coverts, greater coverts of primaries and tertials are glossy black, except a small white spot under the eye; the lower part of the back, rump, tail-coverts, greater coverts of secondaries, belly, flanks, under tail- and wing-coverts are white; the primary quills are black, with a long spot of white on the outer web; the secondary quills are white at the base and black at the tips, with a slight white edging; the tail-feathers are white at the base and black at the tips; the legs and toes purplish flesh-colour; claws black. The winter plumage only differs in having a white gorget on the side and front of the neck. The young birds of the year have the feathers of the back and wings margined with brown, and they do not obtain the white gorget during the first winter.

The egg is yellowish drab, spotted all over with distinct black spots, something like tadpoles.

Family GRUIDÆ.

A second species of this family has lately been added to the list of British birds, but as only one capture has been recorded, and that not in these parts, we have nothing to do with it; and, indeed, it appears scarcely entitled to be called British at all,

COMMON CRANE, *Grus cinerea*. The present species, the Common Crane, although it appears to be now nearly extinct in England, does occasionally appear, and an instance of its occurrence was noted by me in the 'Zoologist' for 1865, nearly as follows:—A Crane was shot on Tuesday, the 17th of October, by Mr. Haddon, of Taunton, at Stolford, on the Bristol Channel, between Burnham and Quantock's Head: it measured four feet eleven inches in length from the toes to the tip of the bill, and six feet ten inches from tip to tip of the extended wing: the weight was seven pounds and three-quarters. These particulars were given me by Mr. Haddon, as I had not an opportunity of examining the bird in the flesh, though I have often seen it since in that gentleman's collection, and have taken the following description from it.

It is rather odd that in the very same year the occurrence of three other Cranes in Great Britain was recorded in the 'Zoologist'—one near Manchester, in May, and two in the Shetland Islands, in July: before these the most recent occurrence which I can find noticed was in 1854, in which year Yarrell mentions one having been killed in Sussex, and he mentions several instances from time to time before then. In olden times it seems to have been more numerous, and is often mentioned as a favourite dish at great feasts. Mr. Newman, in his edition of Montagu's Dictionary, quotes from the 'Ibis' a very

interesting account of the young and nest of the Crane; one nest was found in a great boggy marsh in Lapland: the nest was made of very small twigs, mixed with long sedgy grass, altogether several inches in depth and perhaps two feet across; the other nest was about the same size, nearly flat, made chiefly of light coloured grass or hay loosely matted together, scarcely more than two inches in depth and raised only two or three inches from the general level of the swamp.

Of the food of the Crane Yarrell says that it is of a more variable nature than is usual amongst Waders generally. It will feed occasionally on grain and aquatic plants; at other times it makes a meal of worms, reptiles and mollusca.

With the exception of the soft parts, which, as I did not see the bird in the flesh, I cannot quite answer for, the description of Mr. Haddon's bird is as follows:—The head is yellowish rusty; the neck dark dusky, almost black, behind slightly freckled with ash-grey, ash-grey in front; on the head and the upper parts of the neck are a few white feathers; the lower part of the neck ash-grey all round; the back and scapulars are darkish ash-grey, rather broadly margined with rusty, but the margins of the feathers are much worn; wing-coverts ash-grey,—there is a narrow streak of grey along the shafts both of these feathers and those of the back and scapulars; some of the greater coverts are tipped

with dusky; the primary quills are black; the tertials bluish ash, shaded to black at the tips; the two elevated tufts of feathers on the back, which appear to arise from the greater coverts of the tertials, not the tertials themselves, consist of long feathers very much arched and very open in the webs, ash-grey in colour, margined with rusty; the whole of the under parts are ash-grey, with black streaks on the shafts of the feathers, like the upper parts. The description of this bird very nearly agrees with that given by Dr. Saxby of one of the two killed in Shetland, except that in that bird the crown and fore part of the head were dull crimson, and from the eye to the occiput there was an elongated patch of dirty white; and the under parts seem to have been mottled with two shades of grey. The soft parts of Dr. Saxby's bird were as follows:—Bill horn-colour, tinged with green, slightly darker along the ridge and palest at the tip,—after drying the whole bill becomes dark reddish brown; iris rich golden yellow, gradually becoming darker towards the pupil; the tarsi and bare part of the tibiæ brownish black, tinged with olive, the under surface of the feet paler; claws black. Yarrell describes the adult male as follows:—"The beak greenish yellow at the base, lighter in colour towards the point; irides red; forehead, crown, nape and back of the neck dark bluish ash; chin, throat and front of the neck of the same dark colour, but descending four

or five inches lower in front; from the eye over the ear-coverts and downwards on the side of the neck dull white; general colour of the back, wings, rump, tail-feathers and all the under surface of the body ash-grey; wing primaries black; tertials elongated, the webs unconnected and reaching beyond the ends of the primaries;* the tail-feathers are varied and tipped with bluish black; the under surface of the wings and the axillary plume light grey; legs and toes bluish black; claws black." Yarrell says nothing about the black lines on the shafts of the feathers, which appear to me a peculiarity of the bird.

The eggs, according to Yarrell, are of a pale greenish ground colour, blotched and spotted with dark green and olive-brown.

Family ARDEIDÆ.

Of the Ardeidæ, or Herons, there are fourteen British species, but only seven of these, as far as I have been able to ascertain, can be included in the Somersetshire list.

COMMON HERON, *Ardea cinerea*. The Common Heron, which, by the bye, is here invariably called

* This appears to be a mistake, as the feathers here described are the greater coverts of the tertials. See also Dr. Saxby's account.

the "Crane," is plentiful throughout the county, there being two Heronries in the county itself,—one at Picton, in the West, and one at Brockley Woods, in the East,—besides others in the neighbouring counties of Devon and Dorset, which no doubt help to keep up the supply of these birds in this county, especially in the autumn and winter, when they stray to long distances from their breeding stations: consequently this stately but rather ungainly bird may often be seen fishing in our rivers, brooks and rhines, and exhibiting an example of patience rarely equalled by the most pertinacious fisherman. Fortunately for itself it is extremely wary in its nature, and gives the gamekeeper a wide berth, otherwise its numbers would soon be considerably decreased.

This bird is easily kept in confinement, and if taken young seems to be capable of being made very tame, and becomes an amusing pet; but a mature bird I had brought to me some time ago and kept never became very tame. There was no difficulty in keeping it alive as long as plenty of fish and frogs could be found for it, but on the approach of any one it would crouch in a corner and rock itself from side to side in a most abject manner. At last I got tired of fishing for it, and let it out to fish in the pond for itself, and very successful it seemed to be, especially with the eels: however, as I only cut the feathers of the wing and did not pinion it, it very soon took itself off. While it stayed it was certainly

an ornament to the pond and the lawn; it was also a great terror to some of our lady visitors.

Although the Heron does not generally take to deep water of its own will, still when it does so it is a very good swimmer. Its appearance on the water is rather curious, as it swims with its back low, almost level with the surface, and its long neck perfectly erect.

The food of the Heron consists principally of fish of any sort (perch it will eat without making any difficulty about the prickly back-fin), frogs, water rats, the young of water birds, ducks and moorhens, &c., are not safe from it. When fishing the Heron usually stands with its neck stretched forward at an acute angle to the water and the beak turned nearly straight down, and in this position it will stand, with most wonderful patience, waiting for some unfortunate fish to come within its reach. Yarrell says when fishing the Heron stands with its head drawn back towards the shoulders; but this seems to me inaccurate, as I have watched, through a glass, Herons fishing in the Teign and the Exe (where they are numerous) many times, and they do not appear to me ever to adopt any other attitude than that above described: it certainly is not an elegant attitude, and that perhaps is the reason why it is seldom, if ever, attempted by birdstuffers: I have, however, seen them draw back their head, much in the manner described by Yarrell, immediately before

striking their prey, especially if they were fishing in shallow water. My partially tame one would occasionally, where the bank was steep and the water deep, jump bodily into the water for a fish, and if successful swim to shore with it in its mouth; but I do not know that this is usual with the bird in its wild state.

In the spring the Herons usually accumulate at their favourite breeding stations, or Heronries, in considerable numbers. The nests are usually placed on high trees, and are made of sticks: they look much like exaggerated Rooks' nests. Occasionally also their nests are placed on precipitous rocks, and, but still more rarely, amongst reeds and rushes.*

In the adult bird the beak is yellow; the lore yellowish green; irides yellow (the eyes look very much forward, being set rather at angle to than level with the sides of the face); the forehead is white, over the eye, the top of the head, and the elongated feathers forming the crest, which reach nearly half way down the back of the neck, are black; chin, cheeks and upper part of the neck white; lower part of the back of the neck slightly tinged with grey; back, scapulars, wing-coverts and tertials bluish grey; from the back and scapulars arise some very long narrow drooping feathers of a light grey, almost white; the primary quills are black; the feathers on

*. Yarrell, vol. ii., p. 278.

the front of the neck are white, with a long spot of black on one web of each,—behind these are some long pointed feathers lead-grey, but getting lighter towards the breast; drooping down over the breast from the front of the neck are some very long narrow feathers nearly white, which almost conceal the breast; the breast and flanks are black; the belly, under tail-coverts and thighs are white,—some of the feathers on the belly are streaked with black; legs and toes greenish yellow; claws brown. The young bird has the forehead dusky; the crest is not so long as in the adult; the sides of the face and back of the neck are bluish grey; all the rest of the upper parts are a shade or two darker than in the adult, and there are none of the long narrow whitish feathers; the fore part of the neck is marked as in the adult, but the long drooping feathers over the breast are wanting; the breast and flanks the same colour as the back; belly and under tail-coverts white; thighs white and grey mixed.

The eggs are bluish green, without spots, and rather small for the size of the bird; not pear-shaped, like those of so many of the Waders, but largest in the middle, and both ends nearly the same.

SQUACCO HERON, *Ardea comata*. Yarrell includes Somersetshire amongst the counties in which this beautiful little Heron has been taken, and upon his authority, as well as from what I have been told by

Mrs. Turle, the late birdstuffer at Taunton, who said she had had a specimen through her hands which had been killed near Bridgwater, I include this bird in my list. In enumerating the counties in which it has occurred, Yarrell also mentions the adjoining counties of Devon and Wilts, and in the 'Zoologist' for 1867 is a note of its having been taken at Weymouth, in Dorsetshire: as it comes occasionally so close round us more specimens may have occurred in Somersetshire than have been recorded. It appears only to be a summer visitor to this country, all the captures recorded being in the spring and summer, and Mr. Rodd says that in Cornwall specimens are taken, but always in the spring (April and May).

According to Yarrell the nest is said to be built in trees; Meyer, however, supposes that it is usually placed on the ground in marshy places. As it is a summer visitor to this country we should probably be easily able to solve this difficulty, were it not that the gun is so frequently brought into requisition immediately on the appearance of this or any other rare bird.

The food appears to be much the same as that of others of the family—small fish, frogs, frog-spawn, Mollusca, water-beetles and other insects.

This is a much smaller species than the last-mentioned, being only about nineteen inches from the point of the beak to the end of the tail, instead of

three feet, the average of the Common Heron. The following description is taken from Yarrell:—"The adult bird has the beak greenish brown, darkest in colour towards the point; the lore naked and green; irides bright yellow; the feathers of the top of the head pale yellow-brown, streaked longitudinally with dark lines, the feathers becoming elongated towards the occiput, with a dark line along each outer edge; the feathers forming the occipital plume are eight or nine in number, and from four to six inches in length, lanceolated, pointed, pure white along the centre, bounded on each side with a black line, with a very narrow terminal margin of white; the sides, front of the neck at the bottom and the back rich buff colour; interscapulars reddish brown; the feathers of the back elongated, the webs disunited, each filament having the appearance of a single hair; the colour of a pale reddish brown in those upon the surface, passing into a delicate buff-colour, in those underneath the wings white, the ends of some of the coverts and tertials being tinged with buff; rump, upper tail-coverts and tail-feathers white; chin, throat and belly, under surface of the wings, axillary plume, vent and under surface of the tail-feathers pure white; legs yellowish brown; toes brown above, yellow underneath; claws black. In a younger bird the descending dusky grey streaks on the feathers of the neck are longer and broader, and the lighter ground-colour more mixed with brown; the wing-

coverts tinged with buff; but the plumage of the back and the ends of the tertials are reddish brown, and the younger the specimen the darker the feathers along the middle of the back."

Yarrell, quoting Thienemann, says the eggs are of a pale greenish grey.

LITTLE BITTERN, *Botaurus minutus*. Several specimens of this rare little bird have been killed in various parts of the county: there is one in the Museum at Taunton, which was caught in a Snipe-net near Langport, in October, 1862; Mr. Haddon, of Taunton, has one in his collection, which was shot by him near that town, on the banks of the river Tone, in Priory Fields; the Rev. Murray A. Mathew records the occurrence of one at Weston-super-Mare, in October, 1865;* and one is mentioned by Montagu as having been shot on the banks of the Avon, near Bath, in the autumn of 1789.

The Little Bittern appears to be rather a spring and autumn visitor than a resident: captures, however, are recorded at various times, especially during the summer, and only one in the winter, and that is recorded in the 'Zoologist' for this year (1868). It no doubt occasionally breeds in England, as captures are recorded in the summer months, and Yarrell describes a young bird, with the down still on it, which was obtained on the banks of the Lea river,

* See 'Zoologist' for that year (pp. 9454 and 9457).

near Enfield: he also supposes it to have bred on the Thames. Instances of its breeding in England, though certainly not numerous, probably occur oftener than is supposed, as it is a small bird, easily overlooked, and frequents boggy and sedgy places, where it may well remain concealed.

The nest is said to be placed near the water, amongst flags and rushes, and attached to upright-growing reeds: it is made of rushes, dry willow-twigs, flags and grass.

According to Yarrell the food of the Little Bittern consists of the fry of fish, frogs and other small reptiles, Mollusca and insects; but Meyer says that he has been assured by a very trustworthy observer that he had never found anything but fish in the stomach of the Little Bittern: Meyer adds that in confinement it will feed on large fish cut in pieces, raw meat, boiled potatoes, young frogs, &c.; so probably in a wild state it does not confine itself entirely to a fish diet, especially if hungry.

This very Little Bittern—for although the neck and legs are long in proportion to the body, the body itself does not much, if anything, exceed in size that of the Missel Thrush—is a very pretty miniature of its big brother, next to be mentioned. One peculiarity is common to both—that there are no feathers on the back of the neck, but only a little down. The beak, lore and irides are yellow; the top of the head is black; the cheeks, ear-coverts and sides of the

neck are reddish brown, streaked with light yellowish brown; the feathers on the sides of the neck are long and lap over the bare part on the back of the neck; from the base of the lower mandible, a little way down the sides of the neck, is a streak of white; the chin is reddish brown, streaked with dark brown; the back very dark brown, nearly black, the feathers margined with yellowish brown; the wing-coverts are light yellowish brown, tinged in the centre with a darker shade; the tail is black; the quills the same, the tertials edged with very dark reddish brown; the fore part of the neck, breast and under parts are streaked yellowish brown and white, with a black streak on the shafts of the feathers; the under tail-coverts are white; legs, toes and claws reddish brown. This description, with the exception of the parts liable to fade, is taken from the two specimens at Taunton (Mr. Haddon's and the one at the Museum): these both appear to be young birds, but not so young as the one mentioned by Yarrell with the down still on. The plumage of the adult bird, according to Yarrell, is as follows:—The top of the head, the occiput, the shoulders, the wing primaries and the tail-feathers are of a shining bluish black; all the wing-coverts are buff-coloured; the cheeks and sides of the neck throughout its whole length buff; the chin and the neck in front white, partially tinged with buff; in the lower part of the neck on each side, just in

advance of the carpal joint of the wing when the wing is closed, a few of the feathers have dark centres, with buff-coloured margins; breast, belly, thighs and under tail-coverts buff, with a small patch of white about the vent; under wing-coverts and axillary plume pale buff; the legs, toes and claws greenish yellow.

The egg is said to be of a uniform dull white.

COMMON BITTERN, *Botaurus stellaris*. This species is much more common, not only in this county, but generally throughout England, than the Little Bittern; but it is not now so much so as it was formerly, partly perhaps on account of the gun being so much more in use, and partly on account of the spread of cultivation and drainage, and the consequent destruction of many of its favourite boggy resorts. The last that has come under my notice is in the possession of Mr. Bidgood, the Curator of the Museum at Taunton: it was killed in the Marsh, in December, 1867, and other specimens have occurred from time to time in various other parts of the county.

The Bittern is resident in England throughout the year, and breeds here; but its nest not being often found, the following note from the 'Zoologist' for 1868 may be interesting:—A nest was found near one of the Broads in Norfolk, on the 30th of March, with two eggs in it: the nest was composed of reeds and sticks, as seems to be usually the case.

The food of the Bittern consists, like that of others of the family, of fish, frogs, beetles, mice, young water-fowl, leeches, snakes, worms, and also small birds that come within its reach:* Montagu also adds the warty lizard. It is certainly a voracious bird, as the stomach of one contained two young pike, one seven and the other eight inches in length; in the stomach of another was found the remains of a flat fish, some sea-weed, and a hard pellet of the fur of some animal, apparently that of the water rat and shrew mixed; there were also a few feathers: Mr. Jeffery, the writer of the note, asks, "Does the Bittern throw up pellets of the fur of those animals which it eats?" This question does not appear to me to have been answered yet, but it would seem probable that both fur and feathers are rejected in this manner. Yarrell mentions a whole Water Rail having been taken from the stomach of a Bittern, and such a mass of indigestible matter as the feathers must have been would have caused serious discomfort unless rejected. A considerable amount of sea-weed, as well as fresh-water weed, is often found in the stomach of the Bittern: these weeds seem more probably to be swallowed with than taken separately as food.

The Bittern is a very handsome bird, though without any great variety of colour, as its plumage

* Meyer's 'British Birds,' vol. iv., p. 158.

principally consists of various shades of brown and buff. The beak is brownish yellow, the upper mandible dark brown along the upper ridge and at the point; the lore green; irides yellow; the top of the head very dark brown, almost black; cheeks, ear-coverts and a streak over the eye yellowish brown, pencilled with dark brown; there is a streak of dark reddish brown under the eye; the chin is white, tinged with yellow; on the fore part of the neck are long streaks of reddish brown on a yellowish white ground; belly and under parts the same; the sides of the neck streaked yellowish brown, dark brown and black,—the feathers are very long and almost meet behind on the back part of the neck, on which part there are no feathers, only a sort of yellowish down;* all the feathers of the back and scapulars are black, margined with buffy yellow, the margins freckled with black; the wing-coverts pale brown, freckled with dark brown; the quills dusky, freckled with reddish brown; the tertials are freckled black, reddish brown and yellowish brown; the upper tail-coverts buff, freckled with two shades of brown; tail buff, spotted and freckled with brown; the thighs are buff, minutely freckled on the outside with

* This absence of feathers on the back of the neck in both the Bittern and Little Bittern is probably owing to an odd habit these birds have of laying the neck flat on the back, letting the beak stick straight up.

brown; the legs and toes are greenish brown; the claws are darker.

The eggs are of a uniform pale brownish colour, a shade or two darker than the usual hue of the common Pheasant's egg, but the shell is not of that glossy surface, the texture being somewhat coarser.*

BLACK STORK, *Ciconia nigra*. I include this very rare bird amongst the Birds of Somerset, on the authority of Colonel Montagu, who had a specimen which was shot in West Sedge Moor, adjoining the parish of Stoke St. Gregory, Somersetshire, on the 13th of May, 1814. Mr. Anstice, who communicated the fact to Montagu, and afterwards sent him the bird alive, gives the following account of it:—"As the bird agrees in every respect with the description given of the Stork, except that it is brown or cinereous everywhere but on the belly, which is white, I suppose it to be the young bird of that species. The man assures me it has fed on eels and other small fish since Tuesday last, the 31st." The bird was afterwards sent to Colonel Montagu, who says of it, "If I can furnish fish enough he is likely to live, and to repay me by the examination of his manners, and perhaps some change in his plumage, which I think a few dark glossy green feathers on his back indicate. It is certainly the Black Stork, and the only instance of this bird having varied its

* See 'Zoologist' for 1868 (Second Series, p. 1220).

longitudinal flight so much to the west." Colonel Montagu, writing again in April of the next year, says, "The Stork is so much changed in plumage that it would scarcely be known: it now better accords with the Black Stork than heretofore, for at a distance the whole upper parts appear black, but on a nearer view are found to be a dark glossy green, except the upper part of the back, which has a resplendence of purple, each feather margined with dark green." It does not appear how long the Stork lived, but, like other pets, it died at last: it was stuffed, and is now in the Collection of British Birds in the British Museum.

Since the capture of the bird above mentioned others of the same species have from time to time been taken in various parts of England, and two in the neighbouring counties of Devon and Dorset.

The food of the Black Stork consists mostly of fish, which was the favourite food of Montagu's pet, although it would eat flesh, and when very hungry any sort of offal was acceptable. In a wild state its food appears to be more varied, "fish, snakes, frogs, mice, moles, worms, beetles, grasshoppers and many other insects, small birds and young poultry if opportunity offers. It goes constantly in pursuit of the unfledged young of water and land birds that are to be found on the ground or near the water."* As may

* Meyer's 'British Birds,' vol. iv., p. 180.

be supposed from the general nature of its food, swamps and morasses are its favourite localities, and of these it seems to seek the wildest and most unfrequented, never, like the White Stork, coming voluntarily into the neighbourhood of man.

The nest is said to be placed on very high trees, especially pines.

As appears from the letters I have quoted from Mr. Newman's edition of Montagu's 'Dictionary,' the Black Stork goes through various changes of plumage: that of the adult bird is as follows:—"The beak and the naked skin around the eye are red, tinged with orange; the irides reddish brown; the head, neck all round, upper surface of the body, wings and wing-coverts are glossy black, varied with blue, purple, copper-coloured and green reflections; the primary quill-feathers and tail are black; the whole of the under surface of the body, from the bottom of the neck to the ends of the tail-coverts, white; legs and toes orange-red; claws black." This description is taken from Yarrell, who described from a live specimen in the Zoological Gardens, which often stood for its portrait, Bennett, Selby, Gould and Meyer all having drawn from it.

The eggs are said to be of a buffy white.

SPONBILL, *Platalea leucorodia*. A specimen of this very peculiar-looking bird was shot by the same person who shot the Black Stork just mentioned, at the same place, namely, West Sedge Moor, near

Stoke St. Gregory, in the November of the previous year. There is the beak and skull of another specimen in the Museum at Taunton: this was shot on Curry Moor, but there is no date mentioned. This bird has frequently occurred in the neighbouring county of Devon, and also, but not so often, in Dorsetshire. It is a migratory species, going North in summer to breed and returning South for the winter. The greater number of specimens recorded as having occurred in England have been in the spring and autumn, when the birds are on the move.

The food of the Spoonbill consists of small reptiles, small fish,* Mollusca, aquatic insects, shrimps and sand-hoppers: Meyer adds grasses and the roots of water-plants to the list of food. It is easily kept in confinement, and may then be fed upon any sort of offal.

The place chosen for the nest seems to be very various. Yarrell says in some countries high trees are chosen, and when this is the case the birds associate together, something after the manner of Herons; where no trees are to be found the nest is placed amongst reeds or rushes, and is sometimes even built floating on the water: in whatever

* Three or four sticklebacks were found in the throat, and the remains of others, mixed with sand and silt, in the gizzard, of one shot in Norfolk in May.—'Zoologist' for 1866 (Second Series, p. 264).

position it may be placed it is generally made of dry reeds and weeds.

The Spoonbill is considerably smaller than the Heron, and differs very much in appearance from that bird, in consequence of its very oddly-shaped beak, which is long and flat, swelling out at the tip into a broad flat spoon-shaped form, from which the bird takes its name: it is black, except the rounded part, which is yellow, as is the naked skin on the chin; the tongue is very small in proportion to the beak; in the adult bird the irides are red, in the young bird of the year they appear to be light grey* or hazel;† in the adult bird the whole of the plumage is white, except a band of feathers at the bottom of the neck in front, which is of a buff colour—this tint extends upwards on each side; the feathers at the back of the head are very long, forming a crest; the legs, toes and claws are black, the two outer toes are connected by a membrane. In the young bird of the year the shafts and tips of the primary quills are black, as are the shafts of the greater wing-coverts, and there is no crest.

The eggs, according to Yarrell, are white, spotted with pale reddish brown; but in Meyer's picture of the egg there are no spots.

* 'Zoologist' for 1865, p. 9406.

† Id., 1866 (Second Series, p. 36).

GLOSSY IBIS, *Ibis falcinellus*. One specimen of this rare summer visitor having been killed in this county, in a part of the Marsh called Turf Moor, in the autumn of 1859 or 1860, I have to include it in this list: it was sent to Mrs. Turle, the birdstuffer, at Taunton, for preservation, and was there seen, while still in the flesh, by Mr. Haddon, Mr. Bidgood and several others: it is now, I believe, in the possession of the person who shot it. Several specimens have been taken, at different times, in the neighbouring counties of Devon and Dorset. In different stages of plumage this bird has gone under various names, as the "Bay Ibis" and the "Green Ibis:" in the neighbourhood of Yarmouth, where it appears at one time not to have been very uncommon, it was called by the old gunners the "Black Curlew," as, in consequence of the downward curve of its beak, it somewhat resembles that bird. It frequents muddy swamps and bogs, amongst which it breeds, making a nest of dried grasses, flags, &c.

As may be supposed from the nature of its favourite haunts, the food of the Glossy Ibis consists of aquatic insects and their larvæ, worms, beetles, crickets, snails, mussels, small frogs and small fish.*

The beak is long and slender, curved downwards,

* Meyer's 'British Birds,' vol. iv., p. 189.

much like that of the Curlew: "in the adult bird it is dark purple-brown; the lore and the naked skin around the eyes olive-green, tinged with grey; the irides hazel; the head, neck all round, and the interscapulars deep reddish brown; wing-coverts and tertials dark maroon-brown, with brilliant green and purple reflections; wing-primaries dark brownish black, tinged with green; tail-feathers brownish black, tinged with purple; breast, sides and belly deep reddish brown, like the neck; the under surface of the wings, the flanks and under tail-coverts dark brown; legs and toes green; claws olive-brown. In the young birds the head, cheeks and upper part of the neck behind are dull clove-brown, intermixed with short hair-like streaks of greyish white; on the throat, in front, one and sometimes more patches of dull greyish white placed rather transversely; the whole of the body above and below, the wings and the tail dull uniform hair-brown, with very little of the glossy tints observable in older birds." This description is taken from Yarrell.

The eggs are said to be of a pale green.*

This bird, the last of the British Ardeidæ, makes a sort of link between that family and the large family of Scolopacidæ, the next in succession, and as far as the formation of the beak goes it cer-

* Meyer's 'British Birds,' vol. iv., p. 188.

tainly more resembles the two first-mentioned species of the Scolopacidæ than it does any of the Ardeidæ.

Family SCOLOPACIDÆ.

The Scolopacidæ, the family of Waders at which we have now arrived, is numerous in British species, containing as many as thirty-six, out of which I have been able to include as many as twenty-one amongst the Birds of Somerset.

COMMON CURLEW, *Numenius arquata*. The Common Curlew, the first of the family that claims our attention, is numerous all along our coast during the winter; but the greater part, if not all, of them leave us in the summer: a few, however, remain to breed in the wild hill country in the West around Dunkerry Beacon and Exmoor. On the mud about Burnham and the mouth of the Parret very large flocks of Curlews collect in the winter; and an occasional shot may be had at them as they are driven by the rising tide from the soft mud towards the firmer ground; but they are very wild, and anyone wishing for a shot must conceal himself, long before high water, near a likely spot, and lie perfectly still till the birds come within range. When they are actually driven off the mud by the tide they generally retire for a short distance inland to the neighbouring turnip-fields and water-meadows; a few,

however, remain and fly round and round in small flocks till the mud reappears. I have watched whole flocks of them trying to pitch on the first little bit of mud they can see, forty or fifty trying to stand on a place that will not hold more than three or four, the outsiders always being pushed into the water till they are out of their depth, when they are obliged to fly; however, they generally contrive to pitch again in the middle and shove others into the water; and this goes on till the water has receded far enough to allow space for the whole on the mud.

In Kent the fishermen and mud-diggers appear to have a curious method of enticing the Curlews within shot, and as it illustrates rather an odd habit in the birds, I have copied the following account of their method from the 'Zoologist' for 1866 (Second Series, p. 124):—"They take a trained dog, as much like a fox as possible: after hiding in a dyke they send the dog out on the mud-flats left bare by the receding tide: as soon as the Curlews see the animal they almost invariably attack it, flying round and round, uttering loud yells and occasionally making a pounce at it: the dog, who understands his business well, beats a retreat towards the spot where his master lies hidden. The Curlews follow up their success with vigour, but to their confusion; for as soon as they are well within range the man shoots one, and reloading does the same again: so engaged are they with the dog that sometimes as

many as three are killed before they take themselves off." I should think this method might be prosecuted with considerable success about Burnham, as there are many facilities for hiding and a great many Curlews, and with the help of a breech-loader more than three might probably be bagged at a time. Why the Curlews attack the fox-like dog so vigorously is perhaps somewhat doubtful; but Mr. Power, the author of the paper in the 'Zoologist' which I have quoted, says the fishermen account for it by supposing that foxes are common in the places where they breed, and that therefore they have good cause for their apparent anger and aversion.

The food of the Curlew consists of worms, slugs, small Crustacea and most of the insects that occur by the water-side and in the moist places which these birds frequent. When they retire inland to their breeding-stations they are said to feed upon bilberries, whortleberries and the like, also upon blades of grass and the slender tops of other vegetables, besides lichens and twigs: small pebbles are generally found in the stomach.* Montagu says of one that he kept tame that it became almost omnivorous, eating fish, water lizards, small frogs, insects of every kind that were not too large to swallow, and in default of other food it would eat barley with the Ducks.

* Meyer's 'British Birds,' vol. iv., p. 194.

The Curlew does not make much of a nest—a hole scratched in the sand or earth amongst heather or rushes, and lined with a few small twigs. The young birds run about almost as soon as they are hatched.

The Curlew does not present much diversity of colouring in its plumage. The beak, which is very much curved downwards, is dark brown, except the basal portion of the lower mandible, which is pale brown; the irides are dark brown; the head and neck pale yellowish brown and dark brown; the feathers of the back and scapulars dark brown, almost black, margined with pale yellowish brown; wing-coverts the same, except that the margins are whiter; the lower part of the back and the rump are white; upper tail-coverts pale brown, almost white, marked with dark brown; primary quills black, with white shafts; secondaries and tertials very dark brown in the centre, barred with the same and light smoky brown towards the edges; chin white; fore part of the neck and breast streaked pale yellowish brown and dark brown; belly, flanks, thighs, vent and under tail-coverts white, with a few dark brown marks, fewest on the belly and under tail-coverts; legs and toes pale blue, becoming lead-blue a few days after death; there is a partial web on the first joint of the two outer toes.

The egg is pear-shaped, of a pale olive-brown ground, spotted all over with darker olive-brown and purplish brown.

WHIMBREL, *Numenius phæopus*. This bird, which looks very like, and may easily be mistaken for, a small Curlew, is a spring and autumn visitor to our coast: it is, however, much less common in the autumn than in the spring, and this appears to be generally the case in other parts of England. In the more northern parts, such as the Shetland and Orkney Islands, it remains to breed.

The nest is generally placed on heathy moors, beside some old stump or raised grassy lump of earth, and is made of dry grasses or vegetable matter.*

While on its visits to us the food of the Whimbrel consists mostly of small shell-fish, which it picks up on the mud of the sea-shore and of tidal rivers: of these shell-fish it must devour a good many, as the stomach of one I shot at Exmouth in the spring of 1868 contained two small crabs, nearly whole, one of them measuring as much as three-quarters of an inch across, and the other was nearly the same size; besides these two were the arms and legs and pieces of the shells of various others, but nothing else that I could detect: it does eat other shell-fish, such as mussels, &c. When more inland it appears to live upon snails, worms, beetles, grasshoppers, crickets and other insects, as well as certain berries, such as bilberries, whortleberries and crowberries.†

* Meyer's 'British Birds,' vol. iv., p. 199.

† Id., p. 199.

In plumage and general appearance the Whimbrel much resembles the Curlew, so much so that many of the boatmen at Burnham—where these birds and the Curlew are both common—call them “Young Curlews.” The beak is long and much bent downwards; the upper mandible is black, the lower black at the tip, livid flesh-colour at the base; irides dark brown; the space from the beak to the eye brown; there is a white streak over the eye; the top of the head is dark brown, with a streak of white down the centre; back and sides of the neck brown, streaked with white; feathers of the back and scapulars dark brown, margined light grey and white; the rump white, some of the feathers irregularly marked with brown; tail-coverts barred white and brown; tail barred brown and pale brown, inclining to white on the outside feathers and under the coverts; the lesser wing-coverts are paler brown than the back and with broader and lighter margins; the greater coverts the same brown, chequered near the margins with white; the coverts of the primary quills are dusky, tipped with white; the primary quills are dusky, glossed in some lights with sap-green, the first four are partly barred on the inner web with white, all the rest barred on both webs; the shafts are white; the secondary and tertial quills the same as their coverts; chin white; throat white, streaked with brown; breast white, with narrow streaks of brown on the shaft of each feather; belly white;

under tail-coverts white, marked with brown; under wing-coverts and axillary plume white, irregularly marked with brown; legs and toes livid greyish blue; claws dusky.

The egg in shape and colour resembles that of the Curlew, but, like the bird, is considerably less in size.

SPOTTED REDSHANK, *Totanus fuscus*. I include this rare Wader amongst the Birds of Somersetshire on the authority of Montagu, who, in the Supplement to his 'Ornithological Dictionary,' mentions it under the name of the "Spotted Snipe:" he says, "We have been favoured with another specimen of this rare species, from Mr. Anstice, who shot it near Bridgwater, in September, from a small flock composed of several of the same species and many more Redshanks, which had been in association for some time." I am not aware of any other occurrence of this species in our county, although it may have occurred more than once since, and, as is the case with so many of our rarer birds, the occurrence has never been recorded. Yarrell does not even give us the credit of the specimen mentioned by Montagu, as he only says, "Montagu notices two, both killed in Devonshire."

The Spotted Redshank is for the most part a spring and summer visitor to England in its passage to and from the North, where it breeds. The greater number of captures recorded are in the

autumn, when both old and young are on their journey South from the very high northern latitudes, where they breed, generally within the arctic circle.

The food of the Spotted Redshank appears to consist of small shell-fish, frog-spawn and aquatic insects of all descriptions, small frogs, beetles and worms, but no vegetable matter of any kind.

This bird may be distinguished from the Common Redshank by the general colour of its plumage at various seasons: it is also rather larger in size, though perhaps more slender and elegant in shape; the legs and toes are longer, but more slender in proportion, as is the beak. I have known a young Godwit mistaken for this species; but it may easily be distinguished from the Godwits by the upward turn of the beak in those birds, their larger size and thicker legs and toes. The following description is taken from a bird in my collection, shot at Teignmouth, in Devonshire, in the autumn or winter, but as I never saw the bird in the flesh, and did not get it until the legs and beak had been coloured by the birdstuffer, I cannot say anything about their original colour. The top of the head, back of the neck, back and scapulars ash-grey, some of the feathers slightly margined with white; there is a streak of white from the base of the upper mandible over the eye; the space between the beak and the eye darkish ash-grey; the lesser wing-coverts are ash-grey, margined with white,—in some of the

feathers there is a dark, almost black, streak just inside the white margins; the rump and tail-coverts distinctly barred with ash-grey and white; the primary quills and some of their greater coverts are dusky, the shafts white; the secondaries and some of the greater coverts and tertials ash-grey, regularly marked on the margins with ash-grey and dusky; the tail is ash-grey, the outside feathers slightly barred with dusky; the chin white; the throat and breast are white, slightly clouded with pale ash-grey; all the rest of the under parts are white. The bird here described is very nearly in the winter plumage of the adult as described by Yarrell, the only difference being that Yarrell does not notice the dark marks inside the light margins on the lesser wing-coverts, and describes the front of the neck only as tinged with ash-colour, and the breast as white, like the rest of the under parts: at this time of the year the beak of the adult bird is black, except at the base, where it is bright red; the irides dark brown; legs and toes vermilion-red; claws black. The summer plumage is very different: the beak is nearly black, but the base of the lower mandible is dark red; the irides dark brown; over the eye the eyelid is white; the whole of the head and neck all round sooty black; back, scapulars, all the wing-coverts, secondaries and tertials sooty black, with well-defined triangular spots of pure white along the margin of the web of each feather, which is also

tipped with white ; the primaries black, with white shafts, but no white spots ; breast and belly black, a few feathers with white tips ; under wing-coverts white, with dusky grey shafts ; axillary plume pure white ; under tail-coverts barred black and white ; legs and toes dark red, claws black. I do not know that a specimen has ever occurred in England in this plumage, but only in winter plumage and in a state of change. In young birds of the year the upper surface of the body is tinged with brown, and the white colour of the under surface is clouded with ash-grey ; the legs are orange-red. My bird above described appears to be something between this and the adult winter plumage.

Yarrell, describing the eggs from Hewitson, says they are pear-shaped : in one specimen, he says, the ground is a rich asparagus-green, with rather numerous oblong spots of brownish black over the broadest part of the egg, with smaller spots of ash-grey and reddish brown : in others the ground colour is olive-brown.

COMMON REDSHANK, *Totanus calidris*. This is a much more common species than that last-mentioned, and occurs on our muddy shores and occasionally inland in the more boggy and swampy parts : it generally makes its appearance in the spring and autumn, most frequently in the latter ; it must, therefore, as far as our county is concerned, be considered only as a spring and autumn visitor.

I have never heard of its remaining to breed here, although it does do so in many counties in England and Scotland, and as it is also occasionally killed in the winter months it appears to be at all events partially resident in England.

The food of the Redshank consists of worms, aquatic and other insects and vegetables,* beetles, grasshoppers, and also portions of weeds and mosses;† small stones and pebbles are also found in the gizzard.

The nest is placed on the ground, and is generally very carefully concealed amongst long grass or rushes, the long bents being twisted over it so as to conceal the nest.

The plumage of the Redshank, like that of many of the Waders, varies very considerably at different periods of the year and ages of the bird. The beak is black at the point, dark red towards the base; irides brown; from the base of the beak to the eye is darkish ash-grey, over this and over the eye is a rather indistinct white mark; the top of the head, back of the neck, back and scapulars ash-grey, some of the feathers slightly margined with white; the wing-coverts are ash-grey, spotted on the margins with white and dusky; the primary quills are dull dusky, nearly black; the tertials are brownish,

* 'Zoologist' for 1863, p. 8829.

† Meyer's 'British Birds,' vol. iv., p. 210.

glossed in some lights with sap-green,—on the margins are triangular spots of white; the rump is white; the tail barred white and black; the chin is white; sides and front of the neck and the breast ash-grey, each feather streaked in the centre with dusky,—the centre of the neck and breast are much lighter than the rest, all the rest of the feathers, except the dark streak in the centre, being nearly white; belly white; under tail-coverts white, with a few dusky markings on the feathers; flanks and thighs the same. This is the description of a bird in Mr. Haddon's collection, which was shot at Burnham, and agrees very nearly with the description of the winter plumage of the mature bird given by Yarrell. The legs and toes are red; the claws black. A bird in my own collection, also killed at Burnham, early in the autumn, presents much more the appearance of the summer plumage; space between the beak and eye darkish dusky, over this and over the eye an indistinct white streak; the head and nape are streaked ash-grey and dusky; the feathers of the back, scapulars and wing-coverts are dark dusky, distinctly margined with pale yellowish brown; the lower part of the back and the rump pure white; the tail-coverts are white, barred with dusky: the tail yellowish brown, barred with dusky; the primary quills are very dark dusky, nearly black, the shafts are white; the tertials dusky in the centre, margined and marked with pale

yellowish brown, the margins barred with dusky; the chin is white, streaked towards the cheeks and throat with ash; the sides of the neck and breast are dull greyish ash, streaked in the centre of each feather with dusky; the middle of the throat and breast rather lighter than the sides; the belly is white: flanks and thighs white, streaked and spotted with dusky; under tail-coverts the same.

The egg is pear-shaped, like that of the Golden Plover, which it somewhat resembles, but it is rather smaller, a pale whitish brown ground, tinged with greenish and much spotted, particularly at the longer end, with dark umber-brown; there are also a few spots of a pale purplish brown.

GREEN SANDPIPER, *Totanus ochropus*. The Green Sandpiper is by no means a rare summer visitor, but is to be found by most of our streams and pools at that time of the year; it probably breeds in the neighbourhood, as I have often seen it and received specimens as early as the 8th of August, which would not have given it a very long time to have gone northward to breed and return again. I do not, however, know of any instance in which the eggs of this bird have been taken in the neighbourhood, but this may be because the egg-hunters did not know where to look for the nest, being ignorant of the habit this bird has of nesting in trees or in the deserted nest of some other bird: this does not appear, however, to be quite a universal habit, as

Yarrell mentions an instance of a nest having been placed on the side of a clay-pit, and Meyer says that it breeds on the banks of running streams, where the nest is hidden amongst grasses or under overhanging bushes or trees: the habit of nesting in trees, would, however, appear to be more general than is usually supposed. There is a very interesting paper on the subject by Mr. Alfred Newton, in the 'Zoologist' for 1864, which gives a very full account of the nesting habits of these birds. The Green Sandpiper appears to be rather more than a summer visitor in some counties of England, for Mr. Cordeaux, writing from North Lincolnshire, speaks of these birds having returned to their winter haunts, the small streams in the neighbourhood.* Yarrell also mentions several instances of their having been met with during the winter months.

The food of the Green Sandpiper consists mostly of insects and their larvæ and worms; Meyer adds that it never consumes vegetable matter.

The Green Sandpiper has the beak greenish black; the irides hazel; the space between the beak and the eyes is dusky—immediately over this is a white streak: the top of the head and back of the neck are dull greenish dusky;† the back, scapulars,

* See 'Zoologist' for 1867 (Second Series), p. 547.

† In one of my specimens, probably a young bird of the year, there are a few dull whitish spots on the top of the head.

rump, wing-coverts and tertials are dark dull green, on the margins and tips of the feathers are small spots of dirty white; the primary and secondary quills are black; the upper tail-coverts are pure white; the tail-feathers are very distinctly barred with black and white, the outside feathers on each side having the most white; the chin is white; the throat white, streaked with dusky; the sides of the neck and breast dusky; the belly and under tail-coverts pure white; the axillary plume black, regularly barred with narrow streaks of white rather in the shape of a V with the point towards the base of the feather; the lesser under wing-coverts slightly spotted on the margins with white; the greater are black. The axillary plume will at once distinguish this bird from the Wood Sandpiper, a bird which it much resembles and which has often been mistaken for it, which perhaps is the reason I have not been able to include it in this list, as it may very probably have occurred and been overlooked; the axillary plume and under wing-coverts, in the Wood Sandpiper, are white, with a few transverse dusky bars; the tail-feathers also differ, as in the Green Sandpiper the black bars do not extend to the base of the feather, which is white, and in the Wood Sandpiper these feathers are barred all the way down. The legs, toes and claws of the present species are greenish black. The young birds of the year do not differ much, except that the whitish spots

on the upper surface are probably more numerous than in the adult.

Meyer describes the eggs as greenish olive, with very dark markings or spots.

COMMON SANDPIPER, *Totanus hypoleucos*. The Common Sandpiper, or "Summer Snipe," as it is perhaps more generally called, is a much more numerous and regular summer visitor than the last species. It arrives here about the middle of April (my own earliest note of its arrival is the 12th of April), from which time to the middle of May one or two of these birds always frequent the banks of my pond, and then disappear for a short time, after which they return with their young broods, probably in the meantime seeking some more retired situation for nesting purposes, and perhaps some place where they are less exposed to the attacks of the Pied Wagtails, who for some reason or other bully them most unmercifully, mobbing them as if they were Hawks.

The nest is usually placed on the ground amongst rushes or thickish grass, or amongst the roots of trees, and sometimes perhaps in a hole in a loosely built stone wall,* and is made of moss and a few dry leaves. Yarrell adds that the nest is occasionally found in a corn-field, if near enough to the water.

* 'Zoologist' for 1866 (Second Series, p. 440).

The food of the Summer Snipe consists of worms and aquatic insects. Meyer says the insects are chiefly flies, gnats and water spiders, but rarely snails, if ever so small: perhaps the similarity of food may occasion the animosity of the Pied Wag-tails, as I have seen them occasionally bully a Swallow in the same way, but not so determinedly.

Much has been written in different publications on the power of swimming of the Sandpipers. That all the birds included in the order Grallatores can swim, and swim well if compelled to do so, I have no doubt: the Green Sandpiper and the present species I have seen both swim and dive, but only when wounded; the Curlew when pushed into the water by its companions; a wounded Whimbrel I have seen swim a long way; the Purre also I have occasionally seen swim when wounded, and also if caught by the waves when it has incautiously approached too near them in its search for food, but the greatest use it has then made of its swimming has been to get back to land as quickly as possible; but with a few exceptions, such as the Moorhen and the Phalaropes, and perhaps the tame Heron before mentioned, I have never been able satisfactorily to ascertain that any of the birds belonging to this order voluntarily take to the water for the purpose either of obtaining food or of amusement.

In plumage and general appearance the Summer Snipe is a very pretty neat-looking bird. The beak

is dark brown towards the point, pale yellow-brown at the base; the space from the beak to the eye is dark, over this and over the eye is a white mark; the head, nape, back and all the upper parts are olive-brown, glossed with sap-green—there is a dusky line down the shaft of each feather, and many of the feathers (especially the tertials and greater wing-coverts) have irregular transverse dusky markings on them; the primary quills are dusky, with a white mark on the inner web of all but the first; the secondaries are white at the base, and those nearest the body are also tipped with white; the feathers of the bastard wing are dusky, tipped and partially margined on the outer web with white; the central tail-feathers are the same as the rest of the upper parts, but more marked with zig-zag dusky markings; the exterior feathers are tipped and barred with white; the chin and throat are white; the sides of the neck and breast palish dusky, streaked on the centre of each feather with a darker shade; the rest of the under parts are pure white, except a slight tinge of dusky about the outside of the thighs. The legs and toes are ash-green; the claws brown. The young birds of the year are much more mottled in their appearance, all the feathers of the upper parts being margined and tipped with bars of yellowish brown and dusky.

The eggs are pear-shaped and large for the size

of the bird, reddish white* in colour, spotted mostly at the larger end with dark reddish brown; there are also a few spots of a paler shade; the ground colour appears to fade to a pale dirty white when the eggs have been kept long and blown.

GREENSHANK, *Totanus glottis*. The Greenshank is a much rarer summer visitor than either of the last-mentioned species: it does, however, occasionally occur in our county, and I have seen one or two specimens which had been obtained in the neighbourhood of Burnham. As it is here, it seems to be merely an accidental visitor to most of the other counties in England, making its appearance in the spring and autumn, in which latter season the greater number of captures are recorded.

The nest, like that of most of this family, seems to be merely a hole scraped in the ground, lined with a few fragments of heath and blades of grass.†

In the way of food this bird appears to have a most decided partiality for fish. Yarrell makes mention of two that had been feeding on small smelts and shrimps, and of another that had swallowed a bearded loche; besides fish it feeds on grubs, worms, aquatic and winged insects, and small seeds.‡

* Yarrell, vol. ii., p. 655.

† Id., p. 667.

‡ See note in 'Zoologist' for 1867, by Mr. Clark Kennedy.

I have taken the following descriptions of the Greenshank in its summer and winter plumages from Meyer's 'British Birds,' as I have not a specimen in my own collection from which to describe. In the summer plumage, "the top of the head, back of the neck, back and scapulars consist of dusky feathers, with paler edges; the longer feathers of the scapulars and tertials are black in the centre and regularly edged with a border of white spots; two narrow white bands are formed on the wings by the white tips of the feathers forming the greater wing-coverts; the feathers which cover the shoulders of the wings are liver-coloured; the rump is white; the upper tail-coverts have a dusky spot or bar on each feather near their tips, and the shafts are dusky; the tail is barred with dusky and greyish white; a dusky space between the beak and the eye extends in small spots over the cheek, and communicates with more numerous and larger drop-shaped dusky spots over the sides and upper part of the breast; the under parts are pure white from the chin to the vent; the base of the beak and the legs are bluish green; the claws and tip of the beak dusky; iris sepia." Yarrell, however, describes "the legs and toes as olive-green. In winter the ground-colour of the upper parts, with the exception of the pure white rump, is a pale bluish ash; the top of the head, nape, cheeks, back and sides of the neck are spotted

with small dusky centrals and shafts to each feather; the upper edge of the wing-coverts, frontal edge and quills are dusky; the feathers of the tippet have the dusky central spots broadest; those of the back and wing-coverts are finely pencilled with dusky, and the tertials and greater wing-coverts have the peculiar triangular spots on their edges; the tail-feathers are narrowly barred with dusky and greyish ash; all the under parts are pure white; the legs and beak the same as in the summer plumage, but paler; iris dusky." The change from winter to summer plumage does not appear to be produced by moult, but like the spring change of so many other birds, especially those of this family and of the Plovers, by a change in the colouring secretion of the feathers.

The eggs are pear-shaped; "the ground-colour a very pale yellowish green, sprinkled all over with irregular spots of dark brown, intermixed with blotches of light purplish grey, the spots and especially the blotches more numerous at the larger end."*

BLACKTAILED GODWIT, *Limosa melanura*. This bird is not mentioned by either Montagu or Yarrell as having occurred in this county, and I am myself only aware of one specimen having occurred, and that one was very nearly being overlooked, but

* Yarrell, vol. ii., p. 667.

luckily happening to hear that there had been an unknown bird seen at the poulterer's shop I made some enquiries, and found that a gentleman had bought it with some Peewits to eat: having found out who the gentleman was, I sent and asked if I might be allowed to see it, and he very kindly made me a present of the bird, which turned out to be a Black-tailed Godwit. This bird, thus rescued from the cook, had been shot about the 15th of February in the Bridgwater Marsh, and I was told that the man who shot it said that there was another bird of the same sort in company with it, but that it was too wild to get a shot at. It has occurred more frequently in the neighbouring county of Devon: four of these birds were shot at Slapton Lea, in South Devon, in August or September, 1864; three of them were bought by fishing-tackle makers and destroyed, the fourth came for a short time into the hands of Mr. Bidgood, the curator of the museum at Taunton, where I saw it.

Although the Blacktailed Godwit may generally be considered a spring and autumn visitor,—most numerous in the autumn, when both old and young are returning from their breeding ground,—it is occasionally found in England at other times. Yarrell says it sometimes remains to breed in the marshes of Norfolk and Lincolnshire, and my own specimen was killed in February, and had very probably remained throughout the winter.

The nest is made of grass and other vegetables, and is placed amongst the coarse herbage of swamps and low meadows.

The food of the present species consists mostly of worms, grubs and aquatic insects; small shell-fish, both salt and fresh-water, are often found in the stomach: gravel and small stones are generally present, probably being swallowed for the purpose of assisting digestion.*

The changes of plumage of this bird at various ages and times of the year have led to many mistakes of identity, and to the bird being called by different names by different authors: in its summer plumage it appears to be the "Red Godwit" of Montagu and Bewick, and the young bird appears to be the "Jadreka Snipe" of those authors: in this plumage its appearance is as follows:—"The beak is black for half its length from the point, the basal half pale orange; irides hazel; from the gape to the eye a dark streak, produced by small black spots on feathers of a reddish brown; over this and around the eye a ring of pale brown; the top of the head and the ear-coverts reddish brown, streaked with black; the neck all round, before and behind, a reddish fawn-colour; the feathers of the back in spring become dark brown, almost black, at the base and

* 'Zoologist' for 1864, p. 9289; for 1865, p. 9809; for 1867 (Second Series), p. 539.

on the centre, the ends (which are of an ash-colour in winter) become rufous by degrees till the darker feathers with reddish margins pervade the whole of the back; the wing primaries are more decidedly black, the white-coloured portions more pure and conspicuous; the tail the same at all seasons; the breast white, barred across with rufous-brown and dark brown; the thighs and belly more sparingly barred with dark brown only; vent and under tail-coverts white; legs, toes and claws brownish black." *

The description of my own bird, killed in February, is as follows:—The beak is black at the tip and pale flesh (now faded to dull white) at the base; from the beak to the eye ash-grey; over this and over the eye a broadish white patch, with a few ash-grey streaks on it; the head and back of the neck ash-brown; back, scapulars, wing-coverts and tertials a darker ash-brown,—the shafts of all the feathers are black (some of these feathers are much worn and others appear nearly new, as if a partial moult was going on); some of the wing-coverts are margined with dullish white, in others the margins are nearly worn off; the primary quills are black, with white shafts and a white mark at the base of those nearest the body; the tail-feathers are black at the points and white towards the base, the most white

* Yarrell, vol. ii., p. 686.

being on the two outside feathers; chin white; front and sides of the neck, the breast and flanks pale ash-grey, rather darkest on the sides of the breast; legs, toes and claws dark, almost if not quite black. This agrees very nearly with Yarrell's description of the mature bird in winter plumage.

The young birds of the year in their first autumn are tinged with red on the neck and ash-brown on the under part of the neck and breast. The beak of both the Godwits, the present species and the Bartailed, is slightly curved upwards, and there is a partial web between the two outer toes.

The eggs are pear-shaped; light olive-brown, blotched and spotted with darker brown. This description of Yarrell's agrees very closely with an egg in my collection, which I believe to be a Blacktailed Godwit's, except that the marks on mine are of two shades, one lighter than the other.

BARTAILED GODWIT, *Limosa rufa*. This bird (the "Common Godwit" of Bewick, the "Cinereous Godwit" of that author being also the same species only in its younger plumage) is much more common, not only in this county but throughout England, than the Blacktailed Godwit. It occurs from time to time in various parts of the county, especially in the marsh and on the sea-coast, but it is not quite confined to those localities, the last that came under my notice having been killed in some water-meadows near Crowcombe, on the 19th of January, 1867: it

was a young bird of the year. Like the greater number of these partially migratory Waders, the occurrences of this bird are most frequent in the autumn, and next to that in the spring. This species, however, is not so much of a summer resident with us as some of the others, as it but rarely if ever remains to breed in England; consequently I can give but little or no information about its nesting habits, except that Meyer supposes that, like many of the other species included in this family, the nest is placed on the ground.

The food of the Bartailed Godwit consists of aquatic insects, worms, beetles and small shell-fish.

The summer plumage is as follows:—The beak is nearly black at the point, reddish brown at the base; the irides dusky brown; the space between the beak and the eye dark dusky and brick-dust red mixed; head and back of the neck streaked brick-dust red and very dark dusky; back, scapulars, lesser wing-coverts and tertials dark dusky, all the feathers margined with brick-dust red; the greater wing-coverts dullish brown, margined with white, but these feathers in my specimen may not have assumed their full summer colouring, as many of the feathers on the back and scapulars had not done so; Yarrell, however, describes these feathers as being the same both in summer and winter; the rump and tail-coverts white, with a few black bars on the latter; the tail-feathers brick-dust red, barred with dusky;

the primary quills black, some of those nearest the body tinged with brown on the inner webs and slightly margined with white—the shafts of all are white; chin, throat and all the under parts are brick-dust red, with a few white feathers mixed, especially on the belly and under tail-coverts; these probably are feathers that had not assumed their full summer colouring.

In the winter plumage the head and back of the neck are streaked dark ash-grey and white; the back, scapulars and wing-coverts are darkish ash-grey, nearly dusky, each feather margined with white, the shafts black; the rump and tail-coverts white, with a few dark markings; the tail white, barred with dusky; the primary quills are dark dusky, almost black, those nearest the body are tinged with pale dusky brown on the inner webs, narrowly tipped and margined with white,—the shafts are white; the chin, throat and breast are very pale ash-grey, with a few darker streaks in the centres of the feathers; the flanks are white, with a few ash-grey marks on the feathers; the belly and under tail-coverts are white; the legs, toes and claws nearly black.

In a young bird of the year, shot on the 1st of September, the space between the beak and the eye is darkish brown, mixed with pale brown,—over this and over the eye is a pale dirty white streak; the top of the head is dark dusky brown, streaked with pale

whitish brown; the back of the neck is pale brown, slightly streaked with darkish brown; the feathers of the back and scapulars are dark dusky brown, broadly margined with pale rusty brown; the rump white; the tail-coverts white, with a few distinct dusky bars; the tail is pale rusty brown, the same as the back, barred with dusky, the light part becoming white towards the base of the feathers; the wing-coverts are dusky in the centre, broadly margined with pale whitish brown; the primary quills are very dark dusky, almost black, but much paler on the middle and lower part of the inner web, narrowly tipped with white,—the shafts are white; tertials are the same as the back, but the margins are barred with dusky; the chin is white; the front of the neck and breast is pale whitish brown, with darker lines on the shafts of the feathers; the flanks the same, but rather paler; the belly is white; the under tail-coverts and the feathers by the side of the tail and part of the flanks are white, with longitudinal dusky marks in the centre.

The eggs are much like those of the Blacktailed Godwit, but a little smaller; of a pale yellowish wood-brown ground colour, speckled and blotched with clove-brown and umber-brown.

RUFF, *Machetes pugnax*. This very peculiar bird is an occasional autumn and winter visitor to our county: the last I have heard of was recorded by the Rev. Murray A. Mathew, in the 'Zoologist' for

1864 (p. 8961), as having been shot at Weston-super-Mare, on the 6th of January, in that year, and I have seen one or two specimens at Mrs. Turle's that had been killed in the marsh; but I am not aware that it has been taken here—at all events, of late years—in its full summer dress. At one time these birds must have been much more numerous in our county than they are now, for Montagu says that they were not uncommon in the fens about Bridgwater, but even in his time drains and enclosures had so reduced their numbers that only an occasional stray bird made its appearance.

A great trade was formerly carried on from some of the fen counties, such as Lincolnshire, where the fen-men used to catch great quantities of these birds and fatten them for the London market; but, owing to drainage and reckless destruction, they are not now found in sufficient quantities to keep up a regular trade, the greater number of those now to be seen in the London markets and poulterers' shops being probably sent from Holland.

As suggested by both the generic and specific names,—“Machetes” (a warrior) and “pugnax,”—the Ruff is a most pugnacious bird, especially in the spring, when the males are contending for the females, at which time the most ferocious battles take place; the males then, taking up a position on some little eminence, give battle to any male of their

own species that trespasses on their hill: this habit is well known to the fen-men in the counties where Ruffs abound, or rather perhaps did abound, and is called "hilling," or "going to hill:" the hills, being much trampled on, are easily found by the fen-men, who take advantage of this amiable propensity of "hilling" to trap the Ruffs by setting their clap-nets on the most used hills, and so catching the poor birds who come there for a quiet fight.

The Ruff is easily kept in confinement, but does not appear to breed in that state, as Montagu, who kept some for a considerable time, says the only notice the males took of the females, or "Reeves," as they are called, was to drive them from their food. These Ruffs of Montagu's were brought by him from Lincolnshire into Devonshire—a long journey in the old posting days: they were taken out of their baskets twice a day and penned into a corner of a room and fed, where they appeared to be as happy as eating and fighting could make them. Their love of fighting appears to be quite as great when in confinement as when in their wild state, for besides the travellers above mentioned, Montagu says that, when at Spalding, he was shown into a room where there were about seven dozen Ruffs, and that his intrusion drove some of these from their stands and compelled them to trespass on the premises of others, which produced many battles: he adds that these birds are so pugnacious that they

would starve in the midst of plenty if their food were not placed in several dishes at a distance from each other.

In a wild state the food of the Ruff appears to consist mostly of worms and aquatic insects: when tame they may be fed on bread and milk or boiled wheat.

The nest is usually placed upon a tump in a moist swampy place, surrounded by coarse grass, of which it is formed.

The Ruff certainly varies more in plumage than any other British bird: of all those I have seen in the London markets and the poulterers' shops, or in collections, I do not think I have ever seen two quite alike. The great peculiarity in the appearance of this species is the ruff, which is assumed by the males only for a short time in the breeding season, and disappears very soon afterwards: this ruff consists of long feathers growing out of the higher part of the neck and nearly surrounding the face: there are also two conspicuous tufts growing from the ear-coverts and standing up on each side of the head.

To give a description of all the variations of plumage in this bird would of course be impossible: I have, however, selected, from birds in my own collection, two males in spring plumage, one in winter, and a young bird of the year, which I think will give a general idea of the extensive variations which occur, especially in the spring

plumage of the males; in winter plumage they are more alike, and more like the females. I may add that each individual appears to assume the same coloured plumage each spring.

In one of my specimens, a male in spring plumage, the space between the beak and the eye is rusty brown; the top of the head bay, with a few dark spots; the ruff and ear-tufts very rich bay, every feather tipped with a band of bright bluish purple; the back and scapulars the same rich bay as the ruff, partially barred with bluish purple,—a few ash-grey feathers are intermixed, probably part of the winter plumage which had not yet changed colour; the tertials the same as the back, but rather paler; the wing-coverts ash-grey; secondary quills the same, with light margins; both the upper and under tail-coverts are white; the tail much the same as the tertials; the breast and belly nearly the same bay as the ruff, but rather lighter: there are a few white feathers intermixed, especially on the belly,—these are probably (like the ash-grey ones in the back) the remains of the winter plumage. The other has the face and top of the head white, speckled with buff and dusky; the ruff white, tinged about the ear-tufts with buff; the back and scapulars buffy white, irregularly marked and speckled with black; the wing-coverts are ash-grey—a few feathers appear to be assuming some of the same markings as the back; the tertials and tail marked much the same as the

back, but with a rufous tinge on some of the light parts and the black marks more regular; upper and under tail-coverts white; breast and belly white, with some black markings towards the tips of the feathers. It would seem from the description of these two birds, as well as from other specimens that I have seen, and from the various descriptions given in books, that the feathers of the body, after their spring change, somewhat resemble, especially in their ground colour, the general colour of the ruff.

The bird in winter plumage has the head and neck ash-grey, darkest, even inclining to dusky, on the top of the head; the back, scapulars and wing-coverts ash-grey (a few feathers appear to be assuming the spring change, and are marked with black and rusty); the tail-coverts are white, except those in the centre, which are barred black and rusty, and one of the outside ones has a black spot (probably a change is taking place in these feathers); the tail-feathers are ash-grey, a few of them barred with black and very pale ash, especially at the tips and on the outer webs (also showing a change); chin nearly white; fore part of the neck and the breast ash-grey; the rest of the under parts white. I do not know when this bird was shot, but I should think, from the few indications of a change, it must have been at the end of winter or quite the beginning of spring.

The young bird has the head and neck fawn-colour, streaked with black; the back, scapulars, wing-coverts and tertials black, each feather distinctly margined with rich rusty, inclining to white at the tip of the feather; the tail-feathers barred black and rusty towards the tips, a uniform dusky towards the base; the fore part of the neck, the breast and belly fawn-colour, with a few white feathers intermixed on the belly; under tail-coverts white: the quills of all are dark dusky, nearly black, with white shafts. Yarrell describes the beak as brown; irides dusky brown; the legs and toes pale yellow-brown; claws black: there appears to be but little variation in these parts.

The eggs are pear-shaped; of an olive ground colour, blotched and spotted with olive and liver-brown.*

WOODCOCK, *Scolopax rusticola*. The Woodcock is sufficiently scarce in many of our coverts to make the cry of "Marrk Cock" a sound of considerable interest and excitement, and for a few moments after it has been uttered, Pheasants, hares and rabbits are let pass almost unnoticed, everyone being in an intense state of expectation that the Cock flushed may pass his way. Occasionally, however, in some of our more favoured localities considerable bags are made, especially in the autumn, soon after the

* Yarrell, vol. ii., p. 697.

first arrival of these birds ; for although a few pairs occasionally remain to breed on the Quantock and Brendon Hills, and other similar situations, it must, both here and in other counties in England, be considered as decidedly migratory, by far the larger portion arriving on the English coast about the beginning of October, and, as I before remarked, the first arrivals on our more northern and eastern coasts are generally preceded by considerable numbers of Goldencrested Wrens.

The nest appears generally to be placed under the shelter of a small bush, or amongst roots and brambles : it is a mere hole scratched in the ground and sometimes lined with a few grasses.

The food of the Woodcock consists mostly of the common earth-worm and of various sorts of insects and their larvæ. Meyer adds that the fibres of roots and bog-plants are often swallowed, but whether taken as food or only accidentally with the other food, does not appear certain. In its search for food, which it mostly procures at night, the Woodcock turns over the dead leaves and other decayed matter, and also bores into moist boggy ground, with its long beak, for worms.

The Woodcock, it seems, may be kept in confinement, and may then be fed on worms and bread and milk. Before the days of percussion-caps and breech-loaders, this bird seems usually to have been trapped either by gins, snares or nets ; thus Fabian,

in 'Twelfth Night,' "Now is the Woodcock near the gin;" and Laertes and Polonius, in 'Hamlet,' "As a Woodcock to my own springe;" "Ay, springes to catch Woodcocks." Besides these snares or springes Woodcocks were often caught in nets set across open paths in the woods through which the Woodcocks take their flight when going out "roading," as it is called, that is, when on their evening excursion for food. I believe this method is still practised in Guernsey.

The Woodcock is so well known, and so easily seen and obtained at every poulterer's shop during the game season, that it is useless to waste time in describing it. I may, however, remark that it varies much in size, the difference between the males and females being very considerable, the males being the smallest, so much so that Yarrell says a young male of the year shot in October will sometimes weigh only seven ounces, whilst an old female will frequently weigh as much as fourteen or fifteen ounces: this difference in size and weight will quite account for the small Woodcocks occasionally shot, and often considered by sportsmen as a distinct species.

Varieties of the Woodcock not unfrequently occur: the most usual varieties appear to be a sort of pale buff or cream-colour, and sometimes a mixture of white feathers amongst the ordinary plumage. I saw one of the former at Mrs. Turle's shop in Taunton, on January 7th, 1864; all the lighter

parts were a uniform cream-colour or buff; the dark marks were distinct, especially those on the head, but not nearly so dark as in the ordinary plumage. Yarrell describes one, every feather of which was of a pure delicate untinted white; the bill and legs pale wood-brown. A curious variety is also described in the 'Zoologist' for 1868, the whole of the upper parts of the plumage suffused with a pale ash-grey tinge, the bars and markings being of a very pale rufous hue, and the broad transverse bars on the crown of the head of a pale brownish grey; the under surface of the plumage white, the usual transverse bars being of the faintest water-markings, indeed scarcely distinguishable; iris the same colour as ordinary; bill and legs somewhat paler.

"The eggs are of a pale yellowish white, the larger end blotched and spotted with ash-grey and two shades of reddish yellow-brown."*

GREAT SNIPE, *Scolopax major*. The Great Snipe, or, as it is perhaps more commonly called, the "Solitary Snipe," is by no means a common species in our county, but only occurs from time to time, generally in the autumn: I have no doubt, however, that the occurrences are more numerous than is generally supposed, as probably, in the greater number of instances in which this bird has been

* Yarrell, vol. iii., p. 13.

shot, it has been quietly sent into the larder with other Snipes, and no notice taken of it, except perhaps that it has been considered a remarkably fine Snipe when it has made its appearance at table—as Montagu says, “a fine large Snipe.” A good many notices, however, of the occurrence of this bird in various parts of England appear from time to time in the ‘Zoologist,’ a work which has done so much for the Ornithology of the country.

The Great Snipe does not frequent quite such moist and boggy situations as the Common Snipe, and this may perhaps be accounted for by the difference of food, as Yarrell says the food seems to be entirely the larvæ of *Tipulæ* (“daddy long-legs”) or congenerous flies: Meyer, on the other hand, considers the food of both species to be much the same, namely, worms and insects, and he adds that, in many instances, caddis-worms with their curious cases are found in the stomach, and also many grains of sand; but, contrary to the practice of others of the tribe, this bird is said to cast these cases and other indigestible substances in long pellets.* I do not find that this peculiarity is noticed by Yarrell, but he says, quoting Sir Humphrey Davy, that “their stomach is the thinnest amongst birds of the *Scolopax* tribe,” and this may be some reason for their rejecting these pellets when feeding on any

* Meyer's ‘British Birds,’ vol. v., p. 46.

partially indigestible matter. This bird would, however, appear occasionally to feed on other things than worms and insects, as attention is called, in a note in the 'Zoologist,' to the fact of the stomach of one containing nothing but a few seeds and vegetable matter.*

This species does not appear to breed in England, but in places where it does breed it is said to choose the same sort of locality for its nest that the Common Snipe does. The nest itself does not appear to be a very elaborate structure, but merely a round spot pressed down in some long grass, and tolerably well lined with some dry grass and fragments of herbage.

I have taken Yarrell's description of this bird, as I have not one in my own collection to describe from: it is rather longer than the descriptions in some of the other books, but is more accurate, and as there seems to be another species of Snipe somewhat resembling both this and the Common Snipe, which I shall have to mention in my notes of that bird, I think it very necessary to be as particular as I can in my descriptions of all the three. "In the Great Snipe the beak is dark brown at the end, pale yellow-brown at the base; irides dark brown; from the base of the beak to the eye a dark brown streak; over the eye and over the ear-

* 'Zoologist' for 1864, p. 8890.

coverts a streak of pale brown ; forehead and top of the head rich dark brown, divided along the middle line from before backwards by a pale brown stripe ; neck all round pale brown, the centre of each feather darker brown ; interscapulars, scapulars and back rich brownish black, with central lines and broad margins of rich buff or fawn-colour ; lesser wing-coverts nearly black ; the upper series tipped with pale brown, the lower series tipped with white ; great coverts black, tipped with white ; primary quill-feathers dull greyish black, with white shafts ; secondaries dull black, tipped with white ; tertials black, barred and streaked with pale brown ; rump very dark brown, edged with pale brown ; upper tail-coverts pale yellow-brown, varied with dark brown ; tail-feathers sixteen, the four on each outside nearly all white, the others rich brownish black over three-fourths of their length from the base, then a patch of chesnut, bounded by a circle of black and tipped with white ; chin pale yellow-brown ; breast and sides of the body with half-circular bands of brownish black or pale brown ; belly and vent pale brownish white ; legs and toes greenish brown ; claws black." The legs and toes seem subject to some variation in colour,* as Yarrell says he has seen them in fresh-killed birds of a livid

* Meyer has coloured them flesh-colour and described them as olivaceous-grey : Montagu describes them as black.

green and even of a light drab colour. "The females are larger than the males. The males lighter in colour above and below the dark stripe behind the base of the beak, and the breast is less covered with the dark half-circular markings; the white spots at the ends of the wing-coverts are rather larger and more conspicuous from their purer white colour. Young birds in their first autumn have short beaks, and fewer, if any, white outside tail-feathers: these are probably obtained at their first moult, as this species is sometimes described as being without any white outside tail-feathers, and at others with as many as five on each outside."

The eggs are said to be of a yellow olive-brown, spotted with two shades of reddish brown.

COMMON SNIPE, *Scolopax Gallinago*. The Common or Full Snipe is tolerably numerous in most parts of the county, and in some localities which are well suited to its nature it is at times very abundant, but is rather eccentric in its movements, as on one day one may have very excellent sport and on the next may go over the same ground¹ and not see a bird. It is on the whole a migratory species, but, as with the Woodcock, a few pairs remain every year to breed on the Quantock, Brendon and other hills, and probably also on some parts of the marsh, as the Rev. Murray A. Mathew mentions* having seen a

* 'Zoologist' for 1865, p. 9763.

quantity of Snipe in the peat-marsh between High-bridge and Wells, after some heavy rain, in July; and the Taunton paper for the 2nd of September, 1868, mentions Snipes having been shot in Curry Moor by that time. These birds also remain to breed in most of the other counties of England, and in both of the neighbouring counties of Dorset and Devon.

Many persons have noticed the peculiar drumming or bleating sound made by the Snipe in the breeding season: this as well as the action of the bird while making the sound are very well described by Dr. Saxby, in the 'Zoologist' for 1867 (p. 537), and as perhaps it is not very generally known, and opportunities of observing the bird during the breeding season are not very frequent in our county, I may quote what he says on the subject:—"Several Snipes were wheeling about in the air at a great height, and I sat down to watch them as they circled in all directions, now high, now low, but each one evidently preferring to keep above its own particular portion of ground, where, judging from former experience, I felt sure the nest must be. After a considerable height had been attained a sudden descent followed, during which the bleating was heard and the wings were left rigidly extended, or perhaps vibrating in a manner so slight as to be imperceptible: this lasted for three or four seconds; then the birds rose for about eight seconds, when

another descent was made, and after the same movements had been repeated with most astonishing regularity for some fifteen or twenty minutes, a sloping flight was directed towards the ground, and, throwing the wings above the back, at the same time uttering a rapid 'chucking' cry, it dropped out of sight amongst the grass. There can be very little doubt that the bleating sound is made by the wings, for it is only heard while the bird is descending with them extended ; never at any other time."

The nest of the Snipe is generally placed amongst heather or long grass, no particular care being taken to conceal it. Meyer says it is usually lined with a few dry bents and stalks of heath or bog-plants.

The food consists mostly of worms, which the bird procures by boring with its long and sensitive beak in the soft ground it usually frequents ; as well as worms, it appears to eat insects and vegetable substances.* The beak of this, as of all the true Snipes, is peculiarly soft and sensitive towards the tip : when dried the soft skin of this part shrivels up and looks as if pitted all over with small holes—Yarrell says like the end of a thimble : this peculiar soft and sensitive nature of the beak may, in some way, account for the way in which Snipes suffer from starvation when the ground is very hard with frost,

* Meyer's 'British Birds,' vol. v., p. 52.

as not only are they prevented from boring, but it appears doubtful whether they will take their food at all from a hard surface, which must considerably aggravate their suffering.

Although the Common Snipe is as well-known and easily seen as the Woodcock I add a general description, in order that it may be distinguished from the probable species mentioned below. The beak is dark brown at the end, pale reddish brown at the base; irides dark brown; from the base of the beak to the eye darkish brown, over this and over the eye a light streak of pale buff; from the base of the upper mandible over the top of the head are two very dark bands, nearly black, and between these a streak of pale buff; cheeks buff, with a few darkish brown spots; ear-coverts darkish brown; neck all round streaked dark brown and pale buff; middle of the back black, glossed in some lights with sap-green,—some of the feathers have rusty markings on the tips,—each side of the black is a streak of pale buff, outside this streak the feathers are much the same as those of the back, and there is a similar streak of pale buff outside again, but rather paler; the lesser wing-coverts are very dull brown, tipped with very pale buff; primary quills dusky; secondaries the same, but tipped with white; tertials black, marked and zigzagged with rusty; tail-coverts pale brown, zigzagged with dusky; tail-feathers, fourteen in number (differing in this from the Great Snipe

which has sixteen), black at the base, rich rusty barred with black towards the tips; the breast the same as the neck; flanks barred white and black; belly white; under tail-coverts pale rusty; legs and toes greenish brown.

The other Snipe to which I have before alluded as being probably a distinct species has been noticed by one or two writers in the 'Zoologist.' Mr. Roche* says he purchased a Snipe which is fully one-third larger than the Common Snipe; the buff markings on the back and scapulars are very broad and richly coloured, and the beak much longer than others. Mr. Blake-Knox, in a paper in the 'Zoologist' for 1866 (Second Series, p. 302), on the "Migratory and Wandering Birds of the County Dublin," mentions it under the name of the Winter Snipe, and says, "It arrives in October and leaves in February. This bird, though considered the Common Snipe, is widely different from it. It is totally different in markings and size; it also never breeds, to my knowledge, in Ireland, whereas the other does abundantly. Sex or season does not account for this difference. The Common Snipe is alike in winter and summer, and the male is similar to the female. I have also seen the male and female of the Brown or Winter Snipe, and they are similar to each other. The bird I allude to is not the Brown Snipe

* See 'Zoologist' for 1866 (Second Series), p. 83.

of authors (*Macrorhampus griseus*); it is known, I suppose, to every Snipe-shooter as the 'Big Snipe,' the 'Brown Snipe,' the 'Norway Snipe,' &c." The Brown Snipe here mentioned (*M. griseus*) may be put out of the question, as this "Winter Snipe" of Mr. Knox (*Scolopax russata*, I believe, has been proposed as the Latin name should it eventually prove a distinct species) is a true Snipe possessing all the generic peculiarities of the Snipe, whereas *M. griseus* has been considered to differ so materially as to have a claim to separate generic distinctions, for which see Yarrell.

I have been particular in mentioning this probable species, as, if it turns out to be really a true species, it certainly must be counted amongst our Somersetshire birds, as the one from which the following description is taken, and which is now in my collection, was shot near here on the 18th of November, 1863. It certainly differs from both the Common or Great Snipe in many particulars, and appears to agree very nearly with the "Winter Snipe" of Mr. Knox: it is considerably larger than the Common Snipe, and the light markings are of a much richer colour and there are more of them; the beak is about the same colour, but longer than that of the Common Snipe; the head has the two dark streaks, but the streak between them is a rich rusty; the back of the eye to the nape of the same colour, with a few dark spots on the feathers; the sides of the

neck the same; the rest of the back of the neck brownish rusty, with a dark streak in the centre of each feather; back and scapulars velvet-black, every feather narrowly margined and marked with rich rusty,—the stripes down the back are distinctly marked as in the common species, but are much richer in colour, except the lower part of the outer stripe, which approaches the pale cream-colour of the Common Snipe; the rump is black; the tail-coverts rusty brown, barred with black; the number of feathers in the tail the same as in the common species; the part which projects beyond the tail-coverts is rich rusty, with a single irregular bar of black,—the lower part of the feathers has more black than the upper part, the shafts are black; primary and secondary quills much the same as in the common species; lesser wing-coverts black towards the base, marked in the centre with rusty, round this an irregular black mark, and beyond this a margin of pale brownish rusty; shafts black; the greater coverts of the secondaries black at the base, barred towards the tip with black and rusty; tip itself very pale rusty, nearly white; chin nearly white; throat and breast rusty, each feather streaked with dusky; flanks and all the under parts white, barred with dusky.

Varieties of the Common Snipe occasionally occur. A cream-coloured variety was lately shot near here, by Mr. Winter, of Watts House: the

whole colour of the bird is nearly the same as the light streaks on the back, but the places where the darker markings should be are just hinted at.

The egg is pear-shaped; olive-brown ground colour, spotted and blotched, mostly near the larger end, with dark brown and dull purplish brown.

JACK SNIPE, *Scolopax Gallinula*. The pretty little Jack Snipe is by no means so numerous with us as the Common Snipe, and I am not aware that it has ever been met with in our county during the summer, and it certainly does not remain to breed: it is therefore a much more truly migratory species, making its appearance about the end of September and departing about the beginning of April. Notices no doubt occasionally appear of specimens of this bird being procured, in both England and Ireland, during the summer, but these seem to be very scattered cases. Generally the Jack Snipe lies much closer than the Common Snipe, and, rising close under the feet of the sportsman, gives him a very fair shot, as far as distance is concerned, but not a very easy one, on account of its zigzag flight; but, as it generally pitches again very soon, it sometimes affords a very fair afternoon's sport, as far as the expenditure of powder and shot is concerned, and I have known cases in which one Jack Snipe has afforded a whole winter's shooting.

All authors seem to agree that the Jack Snipe has a peculiar attachment to certain localities, visiting

them over and over again. I once had an opportunity of witnessing this local attachment in the Jack Snipe, which continued for two or three winters to visit the same spot, on some meadows near the house here, in spite of drainage and other improvements which had quite driven away all his big relations. What became of him at last I do not know—whether he got shot, or at last found his favourite locality too dry to hold him.

The food of the Jack Snipe consists of aquatic insects and their larvæ and small worms, for which it bores in the mud;* small white larvæ, such as are found in black bogs, are especially mentioned, and seed are also often found in its stomach, once hemp-seed, and generally gravel.†

The nest appears to be made very loosely “of little pieces of grass and Equisetum, not at all woven together, with a few old leaves of the dwarf birch, placed in a dry sedgy or grassy spot close to a more open swamp.” ‡

The plumage of the Jack Snipe differs considerably from that of the Common Snipe, and is much brighter and more glossy. The beak is dark brown at the point, reddish brown at the base; irides dark brown; the space from the beak to the eye dark brown; over this and over the eye a broadish streak

* Meyer's 'British Birds,' vol. v., p. 60.

† Yarrell, vol. iii., p. 43.

‡ Id., p. 44.

of cream-colour ; in this streak, just over the eye, are a few dark brown feathers, making a sort of eye-brow ; the top of the head to the nape dark brown, almost black, with a few spots of rusty ; the sides of the face and neck white, much streaked and spotted with dark brown ; the feathers of the back and scapulars are glossy black, reflecting green and purple, with a few rusty markings on them ; there are two rich cream-coloured streaks down the back, and also (but paler and not so decided) between the scapulars and wing-coverts ; the scapulars are the same, but with more rufous markings ; the whole of the colour of the wing is much like that of the Common Snipe ; the tail-feathers are much pointed, dusky brown in the centre, margined with pale rusty brown ; the chin is white ; the throat streaked white and two shades of brown, one pale yellowish brown and the other darker ; belly and under tail-coverts white ; legs and toes greenish brown ; claws black.

I do not know that varieties of this bird ever occur, as they do of the Woodcock and Common Snipe. I have never seen one, and I do not know that any are mentioned by authors.

The eggs are very rare in collections : they are said to be of a yellowish olive, the larger end spotted with two shades of brown.* Meyer has figured them

* Yarrell, vol. iii., p. 43.

much like those of the Common Snipe, but the ground colour rather browner. They are about the same shape, but of course smaller.

CURLEW SANDPIPER, *Tringa subarquata*. The Curlew Sandpiper, or "Pigmy Curlew," as it is frequently called, has received the name "Curlew" from some slight resemblance to that bird, especially in the downward curve of the beak. It is not very common in our county, but occurs occasionally on our coast, generally in the winter; its occurrence may be, and probably is, more frequent than is generally supposed, as it is sometimes shot with the flocks of Purres and mistaken for those birds, which it somewhat resembles, especially in its winter plumage: it is, however, taller and more elegantly shaped. It may generally be considered a winter visitor to this country, although Yarrell mentions the occurrence of a few specimens during the summer months and in perfect summer plumage, from which he supposes, and probably rightly, that it occasionally breeds in England. I can, however, find no account of the nest.

As well as in appearance, this bird resembles the Purre, or Dunlin, in food and habits, its food consisting principally of insects, such as sand-hoppers, small Crustaceæ, shrimps and worms. Mr. Harting says the stomach of one he examined was filled with the remains of small worms, Coleopterous insects and a few minute pebbles.

The winter plumage is as follows:—The beak is nearly black; the irides dark brown; the space between the beak and the eye darkish,—over this and over the eye a streak of white; the top of the head darkish ash-grey, each feather margined with white; the back of the neck ash-grey, slightly streaked with white; the back, scapulars and tertials darkish ash-grey, each feather narrowly margined with white; wing-coverts paler ash-grey, with broader white margins; primary quills dusky, almost black, with white shafts; rump and tail-coverts white (in this it differs from the Purre or Dunlin); tail-feathers ash-grey, margined with white; chin white; throat white in front, streaked on the sides with ash-grey; the breast is pale ash-grey; the rest of the under parts white, the thigh only feathered about half-way down; the legs and toes greenish brown; the claws black.

The change from this to the summer plumage is something like that of the Bartailed Godwit before mentioned. "The head and neck all round" then become "reddish chesnut, slightly varied with small streaks of black and white; the back, scapulars, small wing-coverts and tertials nearly black, each feather edged with reddish chesnut; the greater wing-coverts ash-brown, edged with greyish white; primary and secondary quill-feathers nearly black, with white shafts; breast and belly reddish chesnut, indistinctly barred transversely with lines of black;

axillary plume white; vent, flanks and under tail-coverts reddish white, barred and spotted with black; under surface of the tail-feathers greyish white; legs and toes greenish black."*

During the autumnal moult the bird assumes a different appearance, part of each plumage being then visible, occasional white feathers being mixed with the red of the under parts, and the ash-grey feathers of the back appearing amongst the dark ones: in this state of plumage specimens frequently occur. The young birds of the year in their first autumn have the neck ash-grey; the feathers of the back, scapulars, wing-coverts and tertials are dark brown, margined with reddish buff, which latter, as the winter approaches, changes slowly to ash-colour, with buffy white and ultimately pure white edges; the under surface of the body is white, tinged with red, becoming afterwards pure white.

Yarrell says, on the authority of Temminck, that the eggs are yellowish white, spotted with dark brown.

KNOT, *Tringa Canutus*. The Knot is not uncommon on our coasts during the winter, but is by no means so numerous as many of the other Waders, and I do not know that it occurs at any other season, as I have never seen a specimen from our county at all in its summer plumage: it is,

* Yarrell, vol. iii., p. 54.

however, occasionally taken in many parts of England in almost perfect summer plumage, both before its departure in the spring and on its return in the autumn.

The food of the Knot consists of aquatic insects and the soft animals inhabiting bivalve-shells, small worms and larvæ.* It can be kept in confinement without much difficulty, and has been fattened for the market like the Ruff: it may be fed upon bread and milk, small worms and finely chopped raw meat. Meyer thinks it strange that the ease with which it can be kept in confinement has not been taken advantage of in order to obtain specimens of the eggs; but, from the appearance of some which I saw in the Zoological Gardens in June, I did not think it probable that they would lay, as they had not at that time, long after their usual period, attained their, summer or breeding, plumage, only a very few feathers having changed. I do not think it probable that birds regularly assuming a nuptial plumage in their wild state, and not doing so in confinement, will breed: the Linnet is perhaps a more easily observed example of this peculiarity.†

But little seems to be known of the nesting habits

* Yarrell, vol. iii., p. 57; Meyer's 'British Birds,' vol. v., p. 68.

† See notes on Linnet, *ante*, p. 200.

of the Knot, but it is said generally to deposit its eggs on a bare tuft of withered grass.*

The winter plumage of the Knot is as follows:—The beak is black; irides hazel; from the beak to the eye darkish ash,—over this and over the eye there is a light streak; the head, neck, back, scapulars and tertials ash-grey, some of the feathers slightly margined with white; the rump and tail-coverts are white, marked with streaks of black following the shape of the feather; the wing-coverts are ash-grey, each feather narrowly margined with white; the primary quills are black, with white shafts; the tail-feathers ash-grey, very narrowly margined with white; the chin white; the sides and front of the neck white, streaked with dusky; breast white, with circular black marks towards the ends of the feathers; flanks the same, but the black markings are more pointed and irregular; belly and under tail-coverts white; legs, toes and claws nearly black. This is the description of one in my collection, which was shot at Burnham in January.

The summer plumage differs much in the same manner as in the last-mentioned species. The forehead, top of the head and back of the neck are reddish brown, streaked with dark brown; back, scapulars, small wing-coverts and tertials black,

* Yarrell, vol. iii., p. 56; Meyer's 'British Birds,' vol. v. p. 68.

margined with reddish brown or white; greater wing-coverts ash-grey; rump and upper tail-coverts white, tinged with red, with crescentic bars of black and edged with white; chin, neck, breast and belly nearly uniform rich reddish chesnut; flanks, vent and under tail-coverts white, tinged with red and spotted with black.

The young bird of the year in autumn has the upper surface of the body ash-grey, each feather with two narrow half-circular bands near the end, the first greyish black, the ultimate band buffy white, later in the season pure white; the neck white, streaked with grey; the breast dull white, tinged with reddish buff.

Both of these latter descriptions are taken from Yarrell, who also says that the eggs are described as being of a light yellowish brown, marked at the larger end with grey and reddish spots, forming more or less a sort of zone, and but little spotted towards the point.

TEMMINCK'S STINT, *Tringa Temminckii*. I include this bird in the Somersetshire list on the authority of Colonel Montagu, who says, under the title "Sandpiper, Little," "Six of these birds were observed by Mr. Anstice in September, 1805, at the mouth of the Brue, near Bridgwater, four of which he shot, but was unable to obtain more than one (on account of the softness of the mud), and that has been kindly added to our collection; the other two

were afterwards seen, but could not be procured." This specimen is now considered to be Temminck's Stint and not the more common Little Stint,* or "Little Sandpiper" of Montagu, which bird, although generally more common, has not I believe been found in Somersetshire, nor can I find any other notice of the occurrence of the present species in the county: we must therefore consider it here as only a very accidental visitor, although perhaps it may occasionally have occurred and escaped notice. In England generally its visits are only accidental, mostly happening in the spring and autumn. In its habits it seems somewhat to resemble the Common Sandpiper or Summer Snipe, frequenting the banks of fresh-water streams and pools rather than the sea-shore.

Yarrell, quoting Mr. Wolley, says these birds breed north of the Bothnian Gulf. The nest is said to be very simple—a few short bits of hay in a little saucer-shaped hollow placed amongst thin grass or sedge, generally not far from the water's edge, but sometimes in the middle of a meadow. Its food appears to be gnats and other insects, which it picks off the grass, and also worms.

This is the smallest of the British Sandpipers, being smaller even than the Little Stint. Yarrell

* Montagu's Dictionary, by Newman—"Sandpiper, Little," "Sandpiper, Temminck's."

says the largest specimen he ever saw was five inches and three-quarters in length, whereas the Little Stint is six inches, and the little Summer Snipe, to which we are more accustomed, is seven inches and a half. The descriptions, according to Yarrell, at different times of the year are as follows:—"The beak is dull black; irides dark brown; feathers of the head and neck pale brown, speckled with dark brown; feathers of the scapulars and back, some ash-brown, others black with rufous margins; wing-coverts nearly uniform ash-brown; primaries dusky brown, the shaft of the first quill-feather whiter than those of the others; secondaries dusky, but tipped with white; tertials uniform dusky brown; tail-coverts dusky brown, those nearest the tail-feathers almost black; tail uniform, or somewhat graduated, the central pair of tail-feathers the longest, the darkest in colour and pointed; the next feather on each outside ash-brown, the next ash-grey, the three outside feathers on each side white, tinged with light ash-grey in the outer webs only, the outside feathers on each side the shortest; the chin is white; the sides of the neck grey; the neck in front pale brown, spotted with dusky brown and tinged with buff; breast, belly and under tail-coverts white; under surface of the wings ash-grey; axillary plume white; legs and toes greenish brown." This is the description of a bird killed in May. An adult bird killed in October has "the head and neck ash-grey, varied

with dark brown; the back and wing-coverts nearly uniform dusky brown, with narrow lighter coloured margins." A young bird of the year killed in the autumn has "the head, neck and upper part of the back ash-grey; wing-coverts, scapulars and lower part of the back ash-brown, each feather ending with a half-circle of black and a minute terminal line of white; primaries dusky black; secondaries the same, but tipped with white; central tail-feathers elongated, pointed, ash-brown; outside feathers white; chin, neck in front, breast and all the under parts white." These descriptions are all taken from Yarrell, and describe the bird at the various times of year and ages at which it is usually taken in England.

PURRE or DUNLIN, *Tringa variabilis*. This little Sandpiper is extremely numerous on our coast, and in the winter, when the greatest numbers are congregated, may be seen running about on the mud in search of food or flying in flocks of hundreds, or even thousands, sometimes nearly invisible against a dull wintry sky, and at others a glistening bright white as the whole flock at once makes a sudden turn, showing their pure white under parts. They generally feed very near the waters on the soft mud, and at such times it is very amusing to watch a flock of them (as they often allow a very close approach) probing the mud with their beaks for worms or running close to the sea and picking up

any small floating substances, sometimes so close as to be caught by a wave that runs up a little further than usual, at which times they have either to swim to land, which they do as quickly as possible, or, rising for a moment on the wing, pitch again just above the reach of the wave; except on such occasions as these, when caught by the water or falling into it when wounded, I have never seen these birds swim, nor do I think they ever do so voluntarily.

The food of the Dunlin consists of aquatic insects, worms, small Mollusca, beetles, gnats, sandflies and spiders. In its search for food it confines itself almost entirely to the close neighbourhood of the water, but it is said occasionally, when driven from its favourite feeding-ground by high tides, especially spring-tides, to retire to some suitable ground a short way inland. I have never seen it do this myself, but it generally appears to me to get very unsettled at this time, and large flocks may be seen almost continually on the wing, wheeling about in all directions, sometimes joining together in immense numbers, and at others breaking up into small parties, until the ebb-tide has again left open at least a portion of its favourite feeding-ground.

Some few remain here to breed, but the great portion retire to more northern latitudes for that purpose. The nest appears to be a very slight structure, consisting merely of a small hole, slightly lined with moss and grass: it is usually placed

amongst heather or long grass, generally nearly on a level with, and not far from, the sea; but it is occasionally placed much higher, indeed at several hundred feet above the sea.*

The variations in the plumage of the Dunlin have led to some little confusion, Bewick calling the bird in its summer plumage the Dunlin (*Tringa alpina* of Linnæus) and in the winter plumage the Purre (*T. cinclus* of Linnæus). Montagu appears to have fallen into the same error, but to have corrected it in the appendix to his 'Ornithological Dictionary.'

The winter plumage is as follows:—The beak is black: irides black; the head, neck, back and scapulars uniform ash-grey, with black shafts to the feathers; the wing-coverts are dark dusky in the centre, broadly margined with ash-grey; the greater coverts of primaries black, some of them slightly tipped with white; greater coverts of secondaries dusky, tipped and slightly edged with white; primaries dark dusky, shafts white, and a patch of white on the outer web of all but the first four—this, with the white tips of the coverts of the secondaries, makes a white bar on the open wing; the tertials are ash-grey; the rump and central tail-coverts darker than the back; the outer tail-coverts white; the tail-feathers are very pale ash-grey, except the two centre ones, which are dusky; the chin is white;

* See 'Zoologist' for 1866 (Second Series, p. 513).

the throat and breast very pale ash-grey, with dark streaks in the centres of the feathers; the rest of the under parts white.

The summer plumage is as follows:—The head and nape streaked with rusty and black; feathers of the back, scapulars, rump and tail-coverts black, margined with rich rusty; the rest of the upper parts the same as in winter; the chin white; the front part of the neck and breast white, streaked with black; the lower part of the breast and the belly as far back as the thighs black; the rest of the under parts white; the legs, toes and claws always black. Birds killed in the spring and autumn are in every possible state of change between these two plumages, and consequently often puzzle the young ornithologist, who of course immediately flatters himself he has got something very rare, and is proportionately disgusted at being told it is only a Purre, which he never believes.

The egg is pear-shaped; of a pale olive-brown ground, thickly spotted and blotched at the larger end with dark brown; the spots at the smaller end are paler and much more thinly scattered.

PURPLE SANDPIPER, *Tringa maritima*. The Purple Sandpiper occasionally makes its appearance on our coast, sometimes singly and sometimes in small flocks, probably the old pair and their brood. It is a migratory bird, only making its appearance here in the winter, and never remaining to breed.

This bird seems to have been overlooked by Bewick; but Montagu notices it as having been killed near Bridgwater as long ago as 1807: later instances are probably more numerous: two in my own collection were killed, one on Stert Island, at the mouth of the river Parret, and the other on the shore between that place and Stogursey; two also, in Mr. Haddon's collection, were killed at the same place. No doubt many other specimens have occurred from time to time, although our coast does not quite agree with the habits of the bird, as it prefers a rocky rather than a muddy coast: there are, however, here and there low rocky ridges running out into the sea, and also some rough shingly places, in both of which places it seeks its food. I have also found it on the same sort of place on the south coast of Devon, at Exmouth. It runs quite close down to the sea in its search for food, and when caught by a larger wave than usual it crouches away from it, holding firmly on to the rock and allowing the spray to dash completely over it;* on the receding of the wave it rises and runs about nimbly till the approach of the next. In the situations in which I have seen it feeding it must occasionally have recourse either to swimming or flying to avoid the run of the sea or to regain its

* See note by Mr. Gatcombe in the 'Zoologist' for 1866 (Second Series, p. 96).

footing. It, however, appears to take to the water much more readily than most, if not all, of the Sandpipers: Dr. Saxby, writing from Shetland, where he had considerable opportunities of watching these birds, says he has seen a small party wade into a deep pool of salt water and deliberately swim across to the opposite side, a distance of about five feet; and upon another occasion he came upon a small flock, several individuals of which were swimming actively about the base of the rock upon which their companions were searching for food.*

The food of the Purple Sandpiper consists of small shell-fish and marine insects, which it picks up amongst the sea-weed and close to the edge of the water.

Meyer says the nest is only a hollow place in the ground, lined with a few mosses or other herbage.

The beak is dark, nearly black, towards the tip, reddish brown towards the base; irides hazel; the head and neck dull bluish lead-colour; back and scapulars dark glossy purple, all the feathers tipped and margined with pale lead-grey;† the rump and

* 'Zoologist' for 1866 (Second Series, p. 513).

† One specimen in my collection, killed at Stert Island late in October, has most of the feathers of those parts distinctly margined with white; the rest, probably the new feathers, margined with the lead-grey; but I can find no trace of the reddish buff margins mentioned by Yarrell as part of the summer plumage.

tail-coverts very dark purple, nearly black; the wing-coverts dark dusky, slightly glossed with purple, each feather distinctly margined with white; the greater coverts are also tipped with white, the tips making a white bar across the extended wing; the primary quills dark dusky, almost black, with white shafts to the feathers, some of those nearest the body very narrowly edged with white; secondaries the same, but distinctly tipped with white; the tertials are darker, glossed with purple and edged with white; the two central tail-feathers rather darker than the rest and glossed with purple, the rest rather paler and edged with white; the chin dirty white; the throat and breast the same as the head, but the feathers on the lower part of the breast are darker in colour and margined with white; the belly white; the flanks, thighs and under tail-coverts white, spotted with purplish dusky; legs and toes dark reddish brown; claws black.

The eggs are of "a yellowish grey ground, interspersed with small irregular spots of pale hair-brown, crowded at the obtuse end and rare at the other."*

GREY PHALAROPE, *Phalaropus lobatus*. The Grey Phalarope occasionally occurs in this county, both on the coast and inland, generally in the autumn. The autumn of 1866 seems to have been peculiarly fertile in these birds, both in this county and

* Yarrell, vol. iii., p. 95.

generally throughout England, so much so that Mr. Gurney published a short pamphlet on the subject, with a map showing in what parts they had been most numerous: in this county he notices as many as twelve specimens having been taken, one of them as far inland as Ilminster; the rest in various parts, mostly on the coast. One of those in my own collection was knocked down by a boy with his cap in the village of Halse, which is about fourteen or fifteen miles from the sea, in November, 1861, and on the same day I saw a Grey Phalarope fly by when I was out shooting at Crowcombe: as that place is not above five miles in a straight line from Halse, it may have been the same bird; the weather was very wild at the time; wind about west, a heavy gale.*

The Grey Phalarope, as may be at once conjectured from the formation of its feet, (the toes being lobed much like those of the Bald Coot), is a good swimmer and much more at home in, and therefore fonder of, the water than any other of the Scolopacidæ, to which class it seems scarcely to belong, as, however much the shape of the beak resembles the rest of the family, the lobe foot seems to afford a decided distinction. Its food consists mostly of thin-skinned Crustaceæ and aquatic and marine insects. Mr. Blake-Knox, writing in the 'Zoologist' for 1866, says on this subject, "Its food I found to be a species of sea-

louse, something like our wood-louse, which greedily preys on animal substances, as dead floating birds, and is to be met with, with other species, amongst floating sea-weed: the bird takes these both by swimming and by dropping on the water, also from sea-weed and the tidal portions of the coast. It swims light as a cork, gull-fashion, and incessantly keeps nodding its head: it also dives! after its food for a distance of five or six feet."

The nest is said to be never far from the sea-shore, made in a hollow of the ground and carefully lined with a few grasses, or formed amongst short herbage.*

Like so many other birds, especially those included in this Order, the Grey Phalarope differs in plumage very materially at different times. Yarrell says the female appears to assume more perfect colours in the breeding-season, and to retain them longer, than the male. A female in fine summer plumage has the beak yellow, the point dark brown; around the base of the beak and on the top of the head dark brownish black; irides dark brown; around the eye is a patch of white; a narrow stripe down the back of the neck; all the back and rump nearly black, with pale yellow margins; lesser wing-coverts pale lead grey, edged with white; greater wing-coverts and secondaries

* Meyer's 'British Birds,' vol. v., p. 118.

lead-grey, with broad ends of white; tertials also lead-grey, margined with orange-yellow; quill and tail-feathers almost black; the front and sides of the neck, the breast and all the under surface of the body uniform reddish chesnut or bay; under surface of the tail-feathers ash-grey; legs, toes and their membranes yellow; claws black. The specimen which I before mentioned as having been killed at Halse has nearly the whole of the beak black, with a little tinge of yellowish brown at the base; the forehead and the space from the beak to the eye white; the top of the head white, spotted with black; the back of the head and neck black, with a little yellowish rusty on the margins; back of the eye and ear-coverts dusky; streak over the eye and longish spot over the ear-coverts white; feathers of the back and scapulars light bluish grey, very slightly margined with white,—amongst these are mixed a good many black feathers, margined with pale yellowish rusty; the lesser wing-coverts dull bluish black, all except those on the shoulder margined with white; the greater wing-coverts black at the base, the rest white; the tail-coverts white, with some black feathers, margined with yellowish rusty, intermixed; the tail-feathers dusky, margined with white: the primary quills dusky, with white shafts; secondaries the same, margined with white; tertials black, some of the feathers margined with yellowish rusty, the rest with white; the chin white; throat

and sides of the neck white, with a slight tinge of buff on the fore part; sides of the breast grey; breast, belly and under tail-coverts white; flanks white, with a few longish grey marks; the legs and toes are yellowish brown. As the winter draws on the dark feathers on the upper parts and the slight buff tinge on the white of the lower parts disappear and are replaced by the grey above and the white below. I believe the autumnal change is by moult, and the spring change by a different secretion of the colouring matter.

The eggs are of "a stone colour, tinged with olive, spotted and speckled with dark brown."* Meyer, in his coloured plate, makes the ground colour a decided olive-green.

This is the last of the Scolopacidæ which I have been able to include; others may possibly have occurred in our county, but the occurrence has not come under my notice, nor has it, as far as I am aware, been recorded.

Family RALLIDÆ.

The Rallidæ, the last family but one amongst the large Order of Waders, is a very small one, containing only six British species, five of which may be included in this list of Somersetshire birds. It

* Yarrell, vol. iii., p. 99.

forms a sort of link between the Waders and the Swimming Birds, some of them—the Moorhen, for instance—taking to the water as readily, and swimming and diving as expertly, as any of the true Swimmers: the gap which is left is still further filled up by the Lobipedidæ, of which the Bald Coot is the sole representative.

LAND RAIL, *Crex pratensis*. The first of the family I have to mention, the Land Rail, or “Corn Crake,” as it is frequently called, is a well-known summer visitor to this county, generally arriving about the end of April,—my earliest note of its arrival is the 23rd,—and departing about the middle of October; sometimes, however, it remains much longer, and may occasionally stay the winter. There is a note in the ‘Zoologist’ for 1867 (Second Series, p. 739) of a Land Rail having been shot in the Isle of Wight as late as the 31st of December; and Mr. Blake-Knox, in the same volume (p. 678) of the ‘Zoologist,’ suggests that these birds occasionally, if not always, hybernate in Ireland, as he has frequently found them in holes in dry ditches during the winter, from which they emerge in fine weather to seek for food: he also adds that he has picked them up dead at sea about the time of the spring and autumn migration; so it would appear tolerably certain that although some may remain the winter, others—and probably the greater quantity—migrate.

I have never myself found them or heard of their being found in this county later than October.

The Land Rail frequents corn-fields, clover-seed and thick grass. The nest is consequently frequently cut out at hay-making time: it is placed on the ground, and formed of a very few dry plants and grasses. Meyer says this bird occasionally has two broods in the year. The food consists of worms, slugs, snails, small lizards and insects, with portions of vegetable matter and a few seeds.*

In plumage the Land Rail is rather a handsome bird. The beak is pale brown; the irides hazel; the feathers on the top of the head are black, narrowly margined with pale yellowish brown; over the eye, extending to the side of the neck, is a broadish patch of bluish grey; space from the beak to the eye, a streak under the eye, and down the side of the neck yellowish brown; underneath this is a broadish patch of bluish grey; back, scapulars, rump, tail-covert and tertial feathers black in the centres, more or less broadly margined with pale yellowish brown; the wing-coverts are chesnut; primary quills darkish chesnut-brown; chin white; lower part of the neck and the breast bluish grey, mixed with pale yellowish brown; flanks and under tail-coverts white, tinged with yellow and striped with reddish brown; belly greyish white; legs, toes and claws pale

* Yarrell, vol. iii., p. 108.

yellowish brown. The young birds in their down feathers are black, and not unlike little Moorhens.

The eggs are a pale creamy chesnut, spotted mostly at the thicker end with chesnut and purplish chesnut.

SPOTTED CRAKE, *Crex porzana*. This is by no means a common bird in our county, although possibly it may not be quite so rare here as is generally supposed, for its very retired habits, the localities which it frequents, and the ease with which it runs through and conceals itself amongst the thickest herbage, from which it is by no means easy to rise it, keep it from general observation.

Whether this bird is resident or migratory may appear doubtful. There is a note in the 'Zoologist,' by the Rev. Murray A. Mathew, of his having shot two as late as the 18th of November, and it makes its appearance again as early as the middle of March; but there seems to be only one record of its having been obtained between those times, and that is by Yarrell, who says one was obtained in the London market in January, 1834.

The food of the Spotted Crake appears to consist chiefly of worms, slugs, aquatic insects, small water and marsh snails, water plants, seeds, and other soft vegetable substances.*

* Yarrell, vol. iii., p. 114; Meyer, vol. v., p. 119; and the 'Zoologist' for 1864, p. 8890.

The nest is usually placed on wet ground and near the water's edge: it is formed of stalks of rushes and water plants. Meyer adds that it is capable of floating on the water.

The beak is yellowish brown, tinged with reddish brown towards the base; irides dark brown; the top of the head is olive-brown, streaked with black; over the eye is a dull bluish grey streak, minutely speckled with white; the space from the beak to the eye is darkish brown; ear-coverts paler brown; cheeks olive-brown, speckled with white; back of the neck olive-brown, speckled with white and with a few black streaks; feathers of the back and scapulars very dark dusky, nearly black in the centres, with very broad margins of olive-brown and occasional streaks and spots of white; rump and tail-coverts the same, but the margins of the feathers on the rump are smaller; wing-coverts olive-brown, a shade browner than the back and not quite so much spotted with white; primary-quills dark olive-brown, paler on the edges; tertials dusky in centres, with olive-brown margins and zigzag transverse white marks; tail-feathers the same, except that the white markings are along the margins; the chin dull bluish grey; throat the same, speckled with white; breast pale olive-brown, speckled with white; flanks darkish brown, streaked with white; belly dirty white; under tail-coverts pale buff. One of my specimens, a young bird, has the chin dull white;

the fore part and side of the throat the same, streaked with brown; legs and toes greenish yellow; claws brown.

The eggs are pale reddish white, spotted and speckled with reddish brown.

BAILLON'S CRAKE, *Crex Baillonii*. I include this rare little Crake in the list of Somersetshire birds on the authority of Yarrell, who says, "In September, 1840, Francis Edwardes, Esq., of Brislington, near Bristol, sent me word that an adult female of this species had been killed a short time before on some marshy ground near Weston-super-Mare, a small watering place on the Bristol channel."

This little Crake, although very rare, is probably resident in England, as its nest has been occasionally found, and it has more than once been killed in November, and one specimen has been obtained in January.

The nest appears to be placed much in the same situation as that of the last-mentioned species. A nest found near Yarmouth, in 1866, was placed in a parcel of reeds growing in water about one foot in depth: it was very small, loosely made and composed of dry rushes.*

This bird is said to feed on aquatic insects and their larvæ, small beetles, spiders and rarely on vegetable matter.

* 'Zoologist' for 1866 (Second Series, p. 442).

Yarrell describes the present species as follows:— In the adult male “the beak is green, the base red; irides red; top of the head and back of the neck clove-brown; centre of the back and scapulars black, with numerous spots and streaks of pure white; wing-coverts and tertials clove-brown, spotted and streaked with pure white; primaries dark brown, the outer web of the first quill-feather edged with white; upper tail-coverts and tail-feathers clove-brown; throat, cheeks, sides and front of neck, breast and belly uniform lead-grey; vent and under tail-coverts the same, but tipped with white; legs and toes flesh-colour. The female has both mandibles green at the point, pale reddish brown at the base; irides crimson-red; neither the black colour on the centre of the back or on the scapulars or the white spots upon the back are so pure in colour as the same parts in the male, nor are the white spots so numerous; the chin white; legs, toes and claws in the preserved specimen pale brown; all the other parts as in the adult male.” Yarrell also describes the young of the year before their first moult as having the neck, breast and under parts pale buffy white, mixed with light brown.

According to Meyer's plate, the egg is pale reddish brown, speckled all over with small dusky specks.

WATER RAIL, *Rallus aquaticus*. The Water Rail, or “Skitty,” as it is often locally called, is resident and by no means uncommon in our county, although,

by reason of its retired habits and the manner in which it can run through and conceal itself amongst the thick reeds and rank herbage which it constantly frequents, it is not so often seen as might be supposed. The power it has of squeezing itself through small holes and amongst the most matted and thickest cover may be at once imagined from the extreme narrowness of the breast-bone, which, when compared with that of other birds of about the same size and weight, shows a most marked difference; for instance, compare it with the Fieldfare or the Snipe, of which the measurements are as follows:—

FIELDFARE.

Extreme breadth of breast-bone	.	7 lines.
„ length of breast-bone	.	18 „
Depth of keel	.	6 „
Whole length of the bird	.	10 in.

Weight about 4 oz.

SNIPE.

Extreme breadth of breast-bone	.	7½ lines.
„ length of breast-bone	.	22 „
Depth of keel	.	9 „
Whole length of bird	.	10 in.

Weight about 4 oz.

WATER RAIL.

Breadth of breast-bone	.	3 lines.
Length of breast-bone	.	18½ „
Depth of keel	.	6 „
Whole length of bird	.	11½ in.

Weight about 4½ oz.

This at once shows the great difference in the breadth of the flat portion of the breast-bone, in proportion to the size of the three birds, there being only half an ounce difference in the weight, and that in favour of the Water Rail, and one inch and a half difference in the whole length,—also in favour of this bird,—while the breadth of the breast-bone is four lines and a half less than that of the Snipe, and four lines less than that of the Fieldfare.

The food of the Water Rail consists of worms, snails, slugs, aquatic insects and the smallest frogs. Dr. Saxby says he found in the stomach of one the fibres of plants, small stones and the mandibles of some beetles. Meyer says that he kept one in confinement for some time, but it never became very tame: it was fed upon bread and milk and chopped raw meat, and occasionally worms.

The nest is usually placed in wet situations amongst thick rushes and rank herbage, and sometimes in willow-beds: it is made of sedge and coarse grass, but is generally carefully hidden and difficult to find.

The Water Rail differs from the rest of the British Rallidæ in the shape of its beak, which is long, narrow and slightly curved downwards: it is red, darker on the upper than the lower mandible; irides hazel; the feathers of the head, neck, back, scapulars, rump and tail-coverts black in the centres, broadly margined with olive-brown; wing-coverts

olive-brown; quills darker brown; tertials and tail-feathers dark brown in the centres, margined with olive-brown; chin, cheeks, throat, breast and belly dull lead-blue; flanks black, each feather rather broadly streaked with white; under tail-coverts white, mixed with pale buff; legs and toes brownish flesh-colour. Young birds have the feathers of the neck and breast edged with pale brown, forming transverse bars; the flanks and thighs not so dark in colour and without the white streaks.

The eggs are of a pale cream-coloured ground, speckled with ash-grey and reddish brown: they are very large for the size of the bird.

MOORHEN, *Gallinula chloropus*. This pugnacious, lively bird is to be found in considerable numbers in all our ponds and pools, and by the side of every running stream. Though by nature rather shy it often becomes very tame, and I find that, without being actually domesticated, it lives in my pond with the tame Wild Ducks and other water fowl, and comes up to feed with them, stealing great pieces of meat and potatoes from under the very beaks of the Gulls, who are never sufficiently quick to regain possession. There is a nest also every year in a laurel-bush, within less than twenty yards of the croquet-ground and immediately opposite to it, in which, in spite of the croquet players and noisy children, three broods are brought up every year. In the spring tremendous battles take place between

the Moorhens, as wherever a pair have established themselves they will allow of no interference or close proximity, all intruders, even their own young of the year before, being driven off, and a sharp watch kept lest some wanderer should intrude within the forbidden limits.

Although the Moorhens eventually drive off their young ones when they come to an age to shift for themselves, during their younger days they are most attentive parents, and show great pluck in their defence, attacking much larger birds as well as animals. In July, 1867, when fishing with a friend near here, I had an opportunity of witnessing a very curious display of pluck and sagacity exhibited by a pair of these birds in defence of their young against a stoat. As the fish were not in the right humour, I was sitting on some rails by the pond, when all of a sudden I heard a splash in the water and a loud alarm cry of the Moorhen. On looking round I saw the bird taking her brood as fast as possible to some thick rushes a little way out in the pond: the other old bird, probably the male, kept walking about on the mud and amongst the long grass and rushes on the bank the others had left: he was evidently in a state of great perturbation, walking carefully about and constantly uttering his alarm cry. One tuft of long grass seemed to have a special attraction for him, and he walked several times all round it, and once even he trod on it, when out jumped a stoat,

and almost caught the Moorhen, who ran into the soft mud and water, where the stoat could not follow him: he, however, went back and hid again, when the Moorhen came back and searched about as before, and the stoat again jumped at him. This happened several times; at last the Moorhen, instead of searching about, beat a retreat up a thick ditch and through some brambles for about twenty yards, when he came out into an open grass field and walked quietly away: soon after the stoat came upon the scent, which he lost for a moment,—where the Moorhen had flown over a deep part of the ditch,—but, after making a short cast, he soon hit off the scent again, and run the Moorhen from scent to view in a very short time, who, however, only ran till the stoat was almost upon him, when he took to wing and flew into a plantation close by. I then thought it was all over and that the stoat was beat; so I suppose thought the Moorhens, for the old hen brought out her brood again, and the male joined them. There was soon, however, another rush and flight of the hen and the young ones, and the stoat again made his appearance. How it would eventually have ended I do not know, probably badly for the Moorhen, as the stoat was very persevering; but at this juncture my friend came up with his gun, and put an end to the proceedings by shooting the stoat as he was making a rush upon the old Moorhen.

There is a very different account of an attack by

a stoat upon a Moorhen in the 'Zoologist' for 1864, in which the Moorhen, after a very short chase, during which it never took to the wing at all, but only hid its head in some thick grass, was killed by the stoat.

On one occasion I witnessed a very interesting proceeding on the part of a Moorhen in taking care of its young and reviving them when exhausted. The mother had led her whole brood into a small pond, from which they could not get out: after a considerable chase I rescued the young ones with a landing-net, but they were almost exhausted from constantly diving to escape being caught. The first I caught I put out on the lawn close to another pond; it was so beat it could not run or walk. While I was catching the others the mother came up and tried to get the young one away, but finding that impossible she immediately sat down and hovered it. The next two I caught were not so exhausted, so the mother unceremoniously kicked them into the pond, where the old male soon came to them and led them off. The last was exhausted like the first: I put it down near where the old bird was hovering the first; she was then in great difficulties, as she could not get them together to hover both at once, which she tried hard to do; but at last she went back to the first, which was certainly getting stronger, and hovered that till it was sufficiently recovered to be pushed into the pond like the two others; and when I left

she was hovering the last one, which I suppose ultimately recovered also.

The nest of the Moorhen is usually placed under cover by the side of the water, and occasionally floating upon it. I have also seen it built on a convenient branch of a laurel overhanging and close to the water. It is generally made of dry grass, flags, rushes, laurel and other leaves. As they have three broods in the year the old nest is often repaired for the expected family, and by the time the third brood is hatched the nest has become rather a serious structure, consisting of several layers of materials. When there is another brood expected no time is lost in repairing the old nest, and I have seen the old birds busily engaged in feeding their young and repairing their nest at the same time; indeed sometimes the broods follow each other so quickly that I have seen the elder family coming up to the old birds expecting to be provided for as well as the younger ones, and sometimes by dint of perseverance they do manage to get a little.

The food of the Moorhen consists mostly of worms, slugs, grasshoppers and other land insects, as well as various kinds of aquatic insects which it picks up out of the weed floating on the surface, or which it obtains by diving, at which it is very expert. It has no objection to corn if it happens to be located in a place where it can get it.

The Moorhen is a conspicuous, lively bird, and is

certainly an ornament to a pond. The beak is bright yellow at the tip, the base and a bare patch on the forehead bright sealing-wax red; the head, neck all round, breast and belly dark lead-grey; the back, scapulars, rump, wing-coverts and tertials olive-brown; primary quills dark dusky, with a narrow white streak on the outer web of the first; tail-feathers dark dusky, nearly black; the flanks the same as the rest of the under parts, but tinged with olive-brown and with a few distinct elongated patches of white; under tail-coverts white on the sides, black in the middle; the legs and toes greenish yellow, becoming almost bright yellow in the spring, especially on the fore part,—there is a small red mark immediately below the feathers on the thigh; the claws greenish horn. The young bird of the year has the beak greenish horn; the red patch on the forehead is not so bright, looking rather like a raw place than the bright patch on the adult; all the upper parts are dull olive-brown; the chin is dirty white; the under parts greyish brown, inclining to white on the belly and vent; all the rest the same as the adult; legs and toes dark greenish. The young birds in their down are the funniest little jet black balls with little red sore-looking patches on the forehead.

The egg is a sort of pale whitish brown ground, irregularly speckled all over with reddish brown and purplish brown.

This is the last of the Rallidæ which I have been able to include in this list: as I said before, this family seems to make a sort of link between the wading and swimming birds, especially as the present species is such an expert swimmer and diver: this link is still further closed up by the next family.

Family LOBIPEDIDÆ.

The family of Lobipedidæ, at which I have now arrived, the last amongst the Waders, is a very small one, containing only one British species.*

COMMON COOT, *Fulica atra*.. The tolerably well-known "Bald Coot" is a common bird in most of our larger ponds, where it breeds and remains throughout the year, except in very hard frosts, when these ponds become frozen; it then leaves them either for ponds less liable to freeze or for the running brooks, and occasionally for the sea-coast. A pair or two generally come to my pond in the winter. Though generally ungainly birds on the land they seem at that time to take longish walks, as I have tracked their unmistakable foot-prints in

* Some systems, that of Meyer for instance, include the Phalaropes amongst the Lobipedidæ, on account of the somewhat similar structure of the feet.

the snow for a considerable distance. They invariably leave me before the breeding-season is much advanced, partly I think because there is not sufficient swampy rushy accommodation, and partly because they are bullied by the Moorhens, who generally have the best of a battle with them, in spite of the superior weight and size of the Coot.

The nest is usually placed amongst flags and rushes growing in the water; sometimes it is built on a tuft of rushes or coarse grass above the water, and sometimes its foundation is actually placed in the bottom in water quite a foot deep, and a structure of reeds, rushes and flags is raised till it reaches quite a foot above the water: the materials of this column are reeds cut up to the required length and laid crosswise on one another over a common centre with great regularity, and the lining is a mass of cut-up reed-blades.* Bewick mentions an instance of a nest which was loosened by the wind and floated about upon the surface of the water in every direction, notwithstanding which the female continued to sit as usual and brought out her young.

The food of the Coot consists, according to Yarrell, of small fish, aquatic insects and vegetable matter. Meyer, however, says that neither fish nor frogs have been found in the stomach of the Coot, but corn of several kinds. In my own pond I have

* 'Zoologist' for 1867 (Second Series, p. 603).

often watched these birds feeding on the weed, for which they constantly dive with great ease and stay down for some considerable time: I have also often watched them feeding on the short grass on the lawn by the side of the pond, cropping it off with the sides of the beak, turning their heads first, on one side and then on the other, so as to bring the sides of the beak on a level with the grass.

Amongst the Coots that occasionally pay me a short visit in the winter I have never noticed the extreme shyness spoken of by some authors; on the contrary, they stay about with the tame wild-fowl, and do not seem to object to being watched when feeding either on the water or the land.

Except for the bald head the Coot would be a very dull-looking bird, but the bald patch on the forehead, which is pure white, enlivens the general appearance very much. The beak also is white, except a small portion at the base, which is tinged with pink; irides crimson; nearly the whole of the plumage is a dull dark lead-grey; the head and upper part of the neck are darker than the rest, rather inclining to black: the under parts are lighter than the upper, more inclining to grey, especially in young birds; the primary quills are dark dusky, nearly black; the secondaries the same, but tipped with white; the legs, toes and membranes are dark green, except a narrow ring of orange just below the feathered part of the thigh. These membranes are rather curious

skinny appendages to the toes, giving to the foot nearly all the swimming power of a perfect web: they extend the whole length of each toe, and are much indented at each joint, especially on the inner side of the middle toe, where they form almost regular half-circles from joint to joint; the hind toe has a similar appendage, but in a less degree; it is much like that of the diving Ducks. The young birds when first hatched are covered with black down, with some light-coloured down hanging loosely about them.

Yarrell says that varieties of the Coot, some quite white and others partially so, have occurred.

The egg is a dull drab-coloured ground, peppered all over with black.

This ends the large Order of Grallatores or Waders, and this bird certainly has been well selected for that place, as, both in habits and formation, it appears allied to both Orders; and had the small family of Grebes been placed the first of the Natatores or Swimmers, the transition, as far as the formation of the feet are concerned, would have been very gradual.

ORDER NATATORES.—*Family* ANATIDÆ.

The whole of the birds included in this large Order, containing as many as one hundred and six British species, out of which I have been enabled to enumerate fifty-eight as belonging to Somerset,

pass a considerable portion of their time on the water, to which element they are well adapted by the formation of the feet, all of them, except the one small family before alluded to, the Grebes, being entirely web-footed—that is, the space between the toes is filled up with a skinny membrane, so that the foot when open and pressed backwards presents a large flat surface to resist the water, and when brought forward the toes close together and a very narrow surface is presented,—the broad surface pressing against the water as the foot is moved backwards, the body of the bird is impelled forwards, and in consequence of the foot closing as it is moved forwards little force is lost by that motion, and the progress of the bird not retarded. The first family of this Order which claims our attention is the Anatidæ or Ducks: it is a large family, including the Geese, Swans, Ducks (properly so called), Diving Ducks and Mergansers: all of these are more or less closely allied, both in general formation and in habits. Amongst the Geese I am afraid I can at present claim but very few species as belonging to Somersetshire. Of the occurrence of the first species usually noticed by writers on British birds, Graylag Goose, I have not been able to find any reliable record: it seems, however, a pity to pass it over quite without notice, as it probably has occurred from time to time, although the occurrence has not been recorded, and also because it is said to

be the original of our tame Geese. On this subject Yarrell says that at one of the shows of Domestic Poultry and Water-fowl held at the Zoological Gardens in 1845, there was a fine specimen of the Greylag Goose exhibited, and next to him a pair of domestic Geese, and that it was obvious the domestic birds were derived from the Greylag. "The pinky flesh-colour of the beak and the white nail; the distribution of the markings of the plumage generally; the large blue-grey space on the anterior portion of the wing; the flesh-colour of the legs and feet; and the voice were alike in both." The white and speckled Geese one sees about in our commons and poultry-yards may easily be accounted for, as all birds seem to vary in the colour of their plumage under domestication, especially towards white: in this case the tendency to variation has probably been increased by a cross with the Bean Goose and Whitefronted Goose; artificial selection has also probably had something to do with it, as, white feathers being the more valuable, the whitest birds have probably for a very long period been selected to breed from; but in spite of these various reasons for divergence, the Goose has differed less than most domesticated species from the original stock.*

* Darwin's 'Animals and Plants under Domestication,' vol. i.

BEAN GOOSE, *Anser Segetum*. It is only lately that I have been able to add this species for certain to the Somersetshire list, although I thought that, like the Greylag Goose, it must have occurred, though no notice had been taken of it. Happening, however, to be at one of the poulterer's shops at Taunton about the middle of December (1868) when a basket of birds from the marsh was brought in, I helped to unpack it, and found two of the present species of Goose, two Whitefronted Geese, about twenty Wigeon, four or five Goldeneyes (females or young birds), two Curlews, and a lot of tame Ducks at the bottom. The two Bean Geese, I was sorry to find, were too much mauled about for me to have any chance of stuffing them, although I wanted them very much for my collection: I managed, however, to identify them by the bill and legs. The marsh was at that time much flooded, looking, from the Quantock Hills, more like a sea than valuable pasture-land, and it had been in this state all the winter, consequently Wigeon and some few other wild-fowl were more numerous than usual in our market; but, with the exception of the four Geese just mentioned, I have not seen anything that could be considered rare or noteworthy.

The Bean Goose is the most numerous of all our Grey Geese, and remains to breed in some parts of England, but more frequently in Scotland, where it is said to make its nest amongst the high heath and

heather, either on an island in some lake or near the borders of one. It has also been known to breed in confinement.

The food of the present species, like that of the other Wild Geese, consists of various sorts of grasses, tender shoots and roots of aquatic plants, young growing corn, and peas and beans; indeed where they are numerous they do considerable damage to these crops, punishing the farmers new-sown beans in early spring through the day, and "paidling about in the mud at night, deil tak' them."* There may be some little difficulty in identifying the four species of our wild Grey Geese; the leading distinctions, however, have been very shortly and neatly summed up by Mr. Harting, in a paper published in the 'Zoologist' for 1867, on the distinguishing characters of some nearly allied species of British Birds, as follows:—

Species.	Bill.	Legs.
GREYLAG . .	Flesh-colour; nail white.	Flesh-colour.
BEAN . . .	Orange; nail, edges and base black.	Orange.
PINKFOOTED .	Pink; nail and base black.	Pink, tinged with vermillion, like Egyptian Goose.
WHITEFRONTED	Pink; nail and base white; forehead white.	Orange.

* 'Zoologist' for 1867 (Second Series, p. 902).

The present species has the irides dark brown ; the head and neck brown, tinged with grey ; back and scapulars dark brown, slightly tinged with grey, each feather margined with greyish white ; wing-coverts, secondaries and tertials greyish brown, edged and tipped with white ; primaries dark brown, tinged with grey ; rump dark brown ; upper tail-coverts white ; tail-feathers dark brown, broadly edged with greyish white ; neck in front, breast and belly dirty white ; abdomen and under tail-coverts pure white ; claws black.*

Yarrell says the egg is dull white.

WHITEFRONTED GOOSE, *Anser albifrons*. Of the present species, the Whitefronted or Laughing Goose, two undoubtedly Somersetshire specimens have come under my notice, both of them shot by my father at Fitzhead, near here, one hard winter, but how long ago I do not know, as no note of the event was made : one of these birds, which was only wounded, was kept in the pond, and although so severely wounded as to cause the loss of one foot it survived for a long time and became very tame ; the other was stuffed by my father, and is now in my collection. I did not till lately† know of any other occurrence of this bird in our county, although in the neighbouring County of Devon both this and

* Yarrell, vol. iii., p. 186.

† See Bean Goose, p. 458.

the Bean Goose seem to be tolerably common, especially in hard winters.

The food of this bird appears to consist of grass, the tender shoots and leaves of clover, and other vegetables and corn. The one before mentioned as having been kept in this pond lived mostly on barley and the short grass on the lawn, of which it ate a good deal. Meyer adds to the list of food "Marine plants and insects, the remains of which are found in its stomach, namely, beetles and other insects and their larvæ, and small pebbles."

The Whitefronted Goose in its wild state does not breed in this country, nor can I find any description of its nest. In confinement it has been known to breed, and has done so in the Zoological Gardens, and it has also been known to cross with the Bernicle Goose.

The bill is of a reddish flesh-colour, the nail or hard part at the tip is white; the irides dark brown; all round the base of the upper mandible as far back as the middle of the forehead is a patch of white, above that a narrow dark, almost black, band; rest of the head and the neck all round greyish brown; the back and scapulars a darker shade of the same, each feather tipped with dirty white; rump nearly black; tail-coverts white; lesser wing-coverts and tertials rather darker than the back and without the dirty white tips; greater coverts of secondaries the same, but narrowly tipped with white, the tips

making a narrow white band on the open wing; the primary quills are dark dusky, nearly black, with white shafts; secondary quills black; the upper part of the breast pale greyish brown; the rest of the breast and the belly a paler shade of the same, but barred and spotted with black; under tail-coverts white; the tail-feathers the same as the back and slightly tipped with white; legs, toes and webs orange, claws whitish horn-colour.

Yarrell describes the eggs of the pair that laid in the Zoological Gardens as white, tinged with buff.

BERNICLE GOOSE, *Anser leucopsis*. I include this bird in my list on the authority of Montagu, who says that in the month of February, 1809, he had a specimen sent him by Mr. Anstice, of Bridgwater, which had been shot and wounded about a week previously: he adds that, on being liberated from its basket, it immediately became reconciled to confinement, and lived and fed with his other aquatic birds. That this bird will become very tame and live to a great age in confinement I have been able to prove, as one died—or rather was killed, I believe by a fox—which had been given to my father, and which, at the time of its death had lived in the pond here for quite twenty years: it was said to have been a very old bird when my father received it.

As I mentioned before, this bird has been known to pair and breed with the Whitefronted Goose. The one in this pond attempted every year to pair

with one of the Wild Ducks, but I believe quite without success, except in its own imagination; as far as that was concerned it seemed to consider itself perfectly successful, and attached itself to its own Duck's brood from the time they were hatched, until by a sort of fussy kindness and attention it had succeeded in killing them all.

The Bernicle Goose is a winter visitor to these islands, and appears to be more numerous on the western coast and in Ireland than on the eastern coast, where its place is supplied by the Brent Goose. The food of this Goose appears to be mostly vegetable: grass it eats in almost any quantity; leaves, shoots and roots of vegetables, particularly such as have been watered by the sea, and contain particles of salt, young shoots of rye and wheat. Judging from the two species in confinement it does not appear to be so partial to these as the Brent Goose. It devours also a good many insects and their larvæ with its food.*

I can find no account of the nest of this bird, and but little seems to be known of its habits in the breeding season.

The Bernicle is a handsome showy bird. The beak is black; the irides dark brown; the space from the beak to the eye black; the forehead, cheeks, chin and upper part of the throat are white;

* Meyer's 'British Birds,' vol. vi., p. 27.

the top of the head, neck all round and breast black ; the feathers of the back and scapulars grey at the base, then a broadish bar of black and white at the tips ; wing-coverts the same ; rump bluish black ; upper tail-coverts white ; primary quills grey at the base, black towards the tips ; tertials the same, but with less black, only slightly tipped with it ; tail-feathers black ; belly and all the under parts white, slightly tinged with grey on the flanks and thighs ; legs, toes, webs and claws black. The young birds have the white of the cheeks varied with black feathers ; the ends of the feathers on the back and wing-coverts tinged with red ; the flanks barred with darker grey.*

The eggs are said to be white.

BRENT GOOSE, *Anser torquatus*. The Brent Goose has been taken on our coast at Weston-super-Mare, as I have been informed by my friend, the Rev. Murray A. Mathew, and probably occasionally at other places. As Laver seems to form part of its food, I wonder it has not occurred oftener, especially in the neighbourhood of Minehead, the head-quarters of that sea-weed. This is a more common winter visitor on the southern coast of the neighbouring counties of Dorset and Devon than in this county. It is easily kept in confinement, and becomes very tame, but cannot quite overcome a wandering dis-

* Yarrell, vol. iii., p. 168.

position, especially if tempted by a field of young barley or wheat just sprouting, of which it seems especially fond.

In a wild state the food of the Brent Goose appears to consist almost entirely of marine vegetables. Yarrell says he has "repeatedly found the stomach full of the leaves and stems of a species of grass that grows abundantly in the shallow pools left by the tide, and with the fronds of different Algæ, particularly of one which seems to be the Laver." Meyer adds to the list of food the insects that are found on the sea-weed that has been washed up and left by the tide. It breeds in very high northern latitudes, and but very little seems to be known of its nest or its habits during the breeding season.

The Brent Goose is perhaps more elegantly shaped than the Bernicle, but it is by no means so strikingly or prettily coloured. The beak is black; the irides very dark brown; the head, neck all round and breast are black, except a small band of white which nearly surrounds the neck about half way down; the feathers of the back and scapulars are dark greyish brown, tipped with dirty brownish white; lesser wing-coverts the same; the greater wing-coverts the same, but tipped with a purer white; rump black; upper tail-coverts white; tail-feathers black; quills black; lower part of the breast, belly and flanks pale greyish brown, darker on the thighs and immediately above them; vent,

under tail-coverts and hinder part of the flanks white; legs, toes, webs and claws black. This description is taken from a young bird of the year, shot at Exmouth during the first week in December. Younger birds have no white band on the neck, and in older birds the feathers on the upper parts are darker and not so broadly edged with dirty white.

The eggs are said to be of a greyish white colour.

EGYPTIAN GOOSE, *Anser egyptiacus*. Whether this beautiful Goose really visits this country in a perfectly wild state and of its own free will may appear doubtful, but so many specimens have from time to time occurred, both in this and many other counties, that it is now considered British, and included in all works upon British Birds: Yarrell, for instance, mentions a flock of eighty having been seen in Hampshire, during some tremendous gales from the West, as long ago as the year 1824, and others, but in smaller numbers, in 1823. I should very much doubt if sufficient numbers had been domesticated in this country at that time to allow of such a numerous flock being found at large. Its head-quarters seem to be Northern Africa and parts of the Mediterranean.

As far as our own county is concerned, specimens have occurred in various parts of it from time to time since the year 1840 (in the February of which year Yarrell says four were shot on the Severn near

Bridgwater) up to the present time.* There have been two escapes here some years ago which I know of; one from my father's pond and one from Mr. Esdaile's at Cotheleston, at both of which places the Geese bred. This bird has also occurred in both the neighbouring counties of Devon and Dorset.

According to Meyer, the food of the Egyptian Goose consists of herbage, barley, oats, turnips, carrots and cabbages, also of the roots of aquatic plants, worms and snails; they are very fond also of grass and eat it greedily, so much so that I remember the farmer who rented the fields near the pond at Cotheleston looking at these Geese eating his grass and exclaiming with considerable indignation, "Drat them Geese, three on 'em do eat as much as a sheep." I believe he eventually succeeded in persuading his landlord to get rid of the Geese.

Meyer says that in Africa, the native country of these birds, the nest is invariably placed near the water, on the edge of such springy places as occur in the sandy dry localities; and that it has also been found on the top of matted water-plants, the floating of which was prevented by the long fibres that are connected with the bottom. The nest is made of

* The occurrence of two of these birds, one on the river Parret, near Bridgwater; and the other near Glastonbury at the end of March, 1864, is recorded by myself in the 'Zoologist' for that year.

reeds, stalks of water-plants and leaves, being lined with cotton and feathers.*

The following description is taken from Yarrell :—
“The beak in the centre is pale brown, the nail, the margins and the base dark brown; the irides wax-yellow; round the eye a patch of chesnut-brown; cheeks and sides of the neck pale rufous-white; forehead, crown of the head, back of the neck, back, scapulars and tail-coverts rich reddish brown; the carpal portion of the wing, the smaller and larger wing-coverts white, the smaller coverts tipped with black; the wing-primaries almost black, tinged with green; the secondaries tinged with reddish bay and edged with chesnut; the lower part of the back, the rump and the tail nearly black; the front of the neck, the breast and upper part of the belly pale rufous-brown; a patch on the breast chesnut-brown; lower part of the belly and vent pale brown; legs and feet pink.”

The eggs are of a dull white, tinged with buff.

WILD SWAN or HOOPER, *Cygnus ferus*. Both this and the next mentioned and very similar species, Bewick's Swan, occasionally occur in this county, especially in severe winters. Montagu mentions an instance of this Swan having been shot near Bridgwater in the year 1805; and one of a pair that made their appearance in these ponds was shot by my

* Meyer's 'British Birds,' vol. vi., p. 45.

father, but whether that was the present species or Bewick's Swan I am unable to say, as the skin got moth-eaten and was destroyed, and the only note I have of the occurrence is one by my father at the head of Bewick's description of the Wild Swan, saying, "Shot at Lydeard Ponds, Dec. 30, 1829." I have also seen specimens of this bird that had been shot on the marsh, and brought into Mrs. Turle's, the birdstuffer at Taunton, for preservation.

The Hooper is easily kept in confinement, and Montagu says that the specimen above mentioned as having been shot near Bridgwater was obtained for him by his friend Mr. Anstice, and that having recovered from its wounds it became very tame, and lived on amicable terms with all his other wild fowl, except a pugnacious Burrow Duck that occasionally attacked it.

Meyer says the food of the Hooper consists of green vegetable matter, grain and fruits, also insects and their larvæ, worms, small frogs and the fry of small fishes: he adds that the manner of feeding is peculiar, the bird not only seeking for its food by preference in shallow water, but turning up the boggy ground in order to obtain roots and worms, and to such an extent is this done that where a number congregate the ground is perfectly broken up.

The nest, which is large and made of reeds and rushes,* is usually placed in a moist situation—so moist that man cannot obtain a footing.†

In this bird the beak, by which it is most easily distinguished from Bewick's Swan, is black towards the point and yellow at the base, the yellow running further down the side of the beak than on the top, extending on the sides beyond the nostrils; the lore, or space between the beak and the eye, is bare of feathers and yellow; the irides are dark; the whole of the plumage is white; the legs, toes and webs black. The young birds in the middle of October have the beak black at the end; a reddish orange band across the nostrils; the base and lore pale greenish white; the general colour of the plumage pale greyish brown; a few of the smaller wing-coverts white, mixed with others of a pale buffy brown.

The egg is of a uniform pale brownish white.

BEWICK'S SWAN, *Cygnus Bewickii*. This bird, which, like the last species, has occasionally been taken in this county, but only in hard winters, much resembles that bird, both in plumage and habits: it may, however, be distinguished by its smaller size and by the beak, the yellow part of which does not occupy so much space or extend so

* Yarrell, vol. iii., p. 194.

† Meyer's 'British Birds,' vol. vi., p. 63.

far down the sides: it also differs in anatomical structure.

The food of Bewick's Swan appears to consist principally of the roots, stalks and leaves of aquatic plants, and the larvæ of insects and worms:* seeds also may be added, as Yarrell says the stomach of one examined by Mr. Thompson contained only minute seeds and gravel.

The nest is said to be composed of boughs of the northern willow, rushes, leaves of divers flags, piled one upon another, without much labour being bestowed in weaving them together.†

The beak of this Swan is black from the tip to above the nostrils and to the base at the margin of the upper mandible; the base of the beak is a more orange-yellow than that of the Wild Swan; the irides are dark; the whole of the plumage of the adult bird pure white; the legs, toes and webs black. The young birds in their first winter are greyish brown; by their second winter they have acquired the white plumage, but the head and breast are strongly marked with rusty red; the base of the beak is lemon-yellow and the irides orange.‡

The egg, like the bird, is smaller than that of the Hooper, and of a pale brownish white colour.§

* Meyer's 'British Birds,' vol. vi., p. 65.

† Id., p. 66.

‡ Yarrell, vol. iii., p. 204.

§ Id., p. 200.

MUTE SWAN, *Cygnus Olor*. Like the Pheasant, this bird has been so long introduced into this country (since the reign of Richard I., who is said to have brought it from Cyprus), and has so well adapted itself to the climate, breeding and rearing its young with little or no artificial protection or food, even in the hardest winters, that it may now be considered a British bird, and must consequently be included in my list of Somersetshire birds, as hardly any large pond or piece of water in the county is without a pair or more of these beautiful birds. The native countries of this bird are the eastern parts of Europe and the southern parts of Russia and Siberia. It may easily be distinguished from either of the last-mentioned species by the beak, the point and greater portion of which is orange-red, and only the base and a knob at the upper part of the base black, thus exactly reversing the disposition of the colours.

The food of this bird consists of roots, leaves, grain, insects and their larvæ, and aquatic vegetable matter, of which it consumes so much that it is often kept in large ponds for the purpose of keeping them free of weeds: it probably also assists in keeping them equally free of fish, the spawn of which it consumes to such an extent that Meyer says he is convinced the fishery of the Thames suffers more from these birds than from all the poachers can accomplish by their nightly labours.

The nest is usually constructed amongst reeds and rushes on some swampy ground near the margin of, or on some island in, the river or pond inhabited by the birds: it is a large clumsy structure of flags and rushes. If there is any chance of the water rising, and the nest being flooded after the female has begun to sit, the male brings fresh materials, which the female works in under the eggs until they are comparatively out of danger.

The adult Mute Swan has the nail, the edges of the mandible, the base of the beak, the lore and a knob which arises immediately below the forehead, black; the rest of the beak reddish orange; the irides brown; the whole of the plumage pure white; the legs, toes and webs black. The young birds of the year by the end of October have "the beak of a light slate-grey, tinged with green; the irides dark; the head, neck and all the upper surface of the body nearly uniform sooty greyish brown; the under surface is also uniform, but of a lighter shade of greyish brown. After the second autumn moult but little of the grey plumage remains. When two years old they are quite white, and breed in their third year." Captain Hadfield, in a note in the 'Zoologist' for 1866, bears out the statement of Yarrell that the Swan acquires its white plumage when two years old, but he says it is not perfectly matured till the third year, the beak of the Cygnet from which he made his observation, in the October of its second

year, being still of a dusky horn-colour, with a slight pinkish or reddish tinge, and he adds there is little prospect of its assuming the bright orange colour this (its second) year. He could not, however, complete his observations, as the Cygnet escaped in the next April; the beak had not then, however, completely acquired its colour, as it was mostly of a pinkish colour, with little appearance of orange.

The eggs are of a uniform dull greenish white.

SHELLDRAKE or BURROW DUCK, *Tadorna vulpanser*. This beautiful Duck is resident and common on the greater part of our coast, breeding in the rabbit-holes amongst the sand-hills, which reach almost from Burnham to Weston-super-Mare, and on the cliffs at Brean Down, and probably at other places both on this and the other side of the Bristol Channel: besides Somersetshire, the Burrow Duck breeds in many other counties in England which are suited to its habits.

These birds collect in considerable numbers at their various breeding stations, from about May till July or August, after which time they become more scarce in that immediate locality, imitating in this respect many of the Gulls, but they are still to be found spread over the great expanse of mud and shallow water in the Bristol Channel throughout the year. On the wing this is a beautiful bird, flying more easily and lightly than any of the other Ducks;

it also walks and runs more easily upon land, resembling in both particulars the Gull rather than the Duck.

The Burrow Duck becomes very tame and breeds readily in confinement, provided it can find a suitable place ; but, notwithstanding its tameness, it has a wandering disposition, and if not very carefully pinioned will almost to a certainty leave its quarters in the spring. I have known two or three broods bred up in these ponds, and the young ones were so tame that they would eat out of one's hand ; it was consequently not thought necessary to pinion them at all ; but in their first spring they all went off, probably to their native places, in the mud and sand of the Bristol Channel : perhaps these escapes may account for occasional visits paid me, especially in the spring, by a few pairs of apparently wild Burrow Ducks ; these, however, never stay more than a few days at a time, and always do their best to decoy away any pinioned ones there may be in the pond.

The nest of the Burrow Duck is usually placed in a rabbit-hole at some considerable distance from the entrance ; but if a convenient hole cannot be found, the nest is occasionally placed in a thick bramble or furze-bush,—always in the very thickest part,—a regular creep being made, through which the bird approaches her nest, and which the eager birds-nester will have to follow up for some distance before he will be able to reach the eggs : the nest itself is

made of a few bents of grass and other dry vegetables, and lined with down picked from the bird herself.

The food of the Burrow Duck consists of seaweed, small fish and their spawn, small shell-fish, sand-hoppers, sea-worms and marine insects. Yarell says he has found the stomach filled with minute bivalve and univalve Mollusca, as though the bird sought for no other food: in confinement they will eat barley and other grain, and potatoes when dressed; and I have seen them pick the meat very clean off the bones given to the Gulls, who have been obliged to stand by and watch the proceedings, for, improbable as it may seem, the Burrow Ducks are the masters.

This Duck, when looked at either amongst ornamental wild-fowl in a pond or viewed in its natural state, is one of (if not quite) the most beautiful of our British Ducks. In the male bird the beak and a small knob immediately below the forehead are the brightest scarlet; the irides brown; the head and the upper part of the neck all round velvet-black, shot in some lights with sap-green; the lower part of the neck all round and the upper part of the breast are pure white; below this is a broadish band all round of rich bay; the back, rump and tail-coverts are pure white; the scapulars black; the wing-coverts white; the primary quills black; the speculum or beauty spot on the secondary quills glossy

green and bronze ; a part of the tertials are nearly black, and some of them are of a rich bay on the outer web ; the tail-feathers are white tipped with black ; there is an irregular broadish black mark running from the breast through the belly to the vent ; all the rest of the under parts pure white ; the legs, toes and webs are of a pale flesh-colour.

The female may be known from the male by a white spot on the forehead, immediately above the beak. The young birds in their first autumn have the beak flesh-colour, the head and neck brown ; the chin and front of the neck white ; interscapulars and wings brown ; wing-coverts white ; tertials white, but edged with chesnut ; primaries black ; speculum becoming green ; all the under-surface white.* The very young birds in their down plumage are spotted dullish black and white.

The egg is considerably larger than that of the common Wild Duck, and perfectly white.

SHOVELLER, *Anas clypeata*. The Shoveller is a rather rare occasional visitor to our county, making its appearance generally in the winter and early spring. Although generally only an early and passing visitor to our county and to England, a few pairs of these birds are said to remain throughout the year and to breed in various parts.* I have never found this an easy bird to keep in a state of

* Yarrell, vol. iii., p. 245.

† Id., p. 250.

confinement; it may, however, be so kept, and will breed: Yarrell mentions a pair having done so in the Zoological Gardens in the summer of 1841. Although occasionally found on the sea and on the shores of tidal rivers, the Shoveller is on the whole an inland rather than a sea bird, frequenting stagnant pools, ditches and small lakes much surrounded by reeds and rushes and shallow water.

According to Meyer, the food of this bird consists of small worms, aquatic insects, fish and frog spawn, tadpoles, small frogs, fresh-water snails, the tender shoots of aquatic plants, grasses, buds and seeds of rushes and sometimes grain; shrimps have also been found in its stomach. Meyer adds that the stomach appears always to contain small stones and pebbles: and this agrees with the contents of the stomach of two of these birds mentioned in the 'Zoologist:' that of the first contained pebbles and some rather large pieces of stem or roots of sea-weed,* and that of the second minute gravel and vegetable matter.†

The nest is generally placed amongst grasses and weeds where the ground is dry, and is made of grasses and weeds: after the female begins to sit she covers the eggs with down from her own body.

The beak of the Shoveller is very peculiar, being very broad towards the tip, much more so than in any

* 'Zoologist' for 1867 (Second Series, p. 742).

† Id., 1864, p. 9120.

of our other Ducks : it is very thickly covered at the sides with a row of small bristle-like teeth, something like the end of a small tooth-comb ; the beak is also very sensitive, so that the bird can easily detect the nutritive parts of anything it may pick up, and by the help of the bristles prevent the escape of such parts, however small or slippery they may be, —it is of a lead-colour in the male ; the irides are yellow ; the head and neck dark glossy-green ; the lower part of the neck, scapulars and part of the tertials are white ; the back is dark brown ; the rump, tail-coverts and tail-feathers almost black, the latter edged with white ; the whole of the lesser wing-coverts pale greyish blue ; the greater wing-coverts dusky, tipped with white ; the primary quill-feathers brownish dusky ; the secondaries the same, with a dark glossy green speculum ; the tertials are some of them pale blue on the outer web, and some of them glossy green ; the lower part of the breast and belly vinous red ; the thighs pale brown, streaked and freckled with dark brown, nearly black ; the legs, toes and webs reddish orange ; claws black. Like all the Duck family, the male birds lose much of their bright distinctive plumage for about two months towards the end of the summer and the beginning of autumn : so great is this change, that any one not knowing that it takes place would be puzzled to recognize the various species at that time, however well he might have known them in their

more usual and brilliant plumage: in the present species the beautiful glossy green of the head and neck is changed to a brown ground colour spotted with darker brown, and the white scapular feathers become dusky. The female has much the appearance of the common Wild Duck, all the feathers of the upper parts being dark dusky in their centres, margined with pale yellowish brown; the wing-coverts and speculum much resemble those of the male, but are not so bright; all the under parts are pale yellowish brown. The young males are at first like the females, but assume their proper colour after their first autumn moult.

The eggs are buffy white, tinged with green, and are rather smaller than those of the Wild Duck.

GADWALL, *Anas strepera*. This is undoubtedly a very rare Duck in our county, as it is in England generally: it has, however, occasionally, though very seldom, made its appearance here. Mr. Sanford has one specimen in his collection at Ninehead Court, which was killed in the marsh, and bought by him in the flesh; and I saw some time ago, at one of the birdstuffers at Taunton, a female Gadwall which he said had been shot near Dunster. There are also a pair of these birds in the collection of the Archæological Museum at Taunton, but there is no record of when or where they were obtained.

The food of the Gadwall seems not to differ much from that of the other Ducks, consisting mostly of

aquatic insects, small fry, spawn of fish and frogs, also the shoots of water-plants, blades of grass and seeds of various kinds.* Like other Ducks, too, it is tolerably easy to keep in confinement, and has been known to breed in this state in the Zoological Gardens.

In a wild state the nest is said to be composed of dry grass and down.

In plumage the Gadwall is on the whole rather a dull-looking bird, in comparison with many of our other Ducks. "The adult male has the bill lead-colour; irides hazel; the head and upper part of the neck light brown, speckled with darker brown; the back grey, produced by an alternation of darker and lighter-coloured grey lines; the point of the wing and the small coverts chesnut, varied with orange-brown; the greater coverts almost black; primaries nearly black; the secondaries similar, but the outer webs forming the speculum white; tertials pointed, and two shades of brownish grey, the darker colour occupying the centre of each feather, the lighter colour forming the margin; rump and upper tail-coverts bluish black; tail-feathers dark brown, with lighter-coloured edges; the lower part of the neck in front and on the sides dark grey, each feather ending in a half-circle of lighter grey; breast and belly white; sides, flanks and vent covered with two shades

* Meyer's 'British Birds,' vol. vi., p. 85.

of grey in short lines; under tail-coverts bluish black; legs, toes and webs orange; claws black. The female has the head and upper part of the neck spotted with dark brown on a surface of pale brown; the alternate crescentic bands on the lower part of the neck in front dark brown and pale brown, but the bands broader than in the male; under surface of the body white; lower part of the neck behind and upper surface of the body brown, the feathers edged with pale brown; wing-coverts brown, with paler margins; speculum like that of the male; tail-feathers dark brown, with edges and tips of pale buffy brown and white." Yarrell, from whom these descriptions are taken, adds that the young birds of the year at the Zoological Gardens, compared with the old birds, are of a more uniform reddish brown colour above, speckled with dark brown; the middle of each feather is also dark brown.

Yarrell also says that one of the eggs laid in the Zoological Gardens was of a uniform buffy white colour, tinged with green.

PINTAIL, *Anas acuta*. This elegant species of Duck is a tolerably regular, but not very common, autumn and winter visitor to this county, frequenting both the coast and the inland waters in the marsh: this season (1868-69) it has perhaps been more common than usual. It is easily kept in confinement, and is a very ornamental bird. Montagu says it has

been known to breed in confinement; but this appears to be rarely the case, although the male adopts the usual change of plumage in the summer.

The nest is said to be placed amongst rushes and strong herbage, and is invariably well concealed.

The food of the Pintail seems to be very various, consisting of plants, insects and their larvæ, Mollusca, snails, and the spawn of frogs and fishes. Meyer adds that it consumes small fish and frogs for want of better provender, but not from choice: he also adds to the list of food the blades of grass, seeds, and the roots of water plants and corn, to obtain which it flies to corn and stubble-fields; but I have never seen the Pintail in my pond feed on grass, like the Wigeon: its principal food seems to be the pond-weed and the insects and small Mollusca it picks up with it: the weed it obtains by tipping its head downwards into the water, after the manner of tame Ducks; but I have never seen this or any other of the true Ducks dive for food, although they all—even the Burrow Ducks—do so when sporting or washing themselves, and when wounded and trying to escape.

The Pintail, though not quite so showy as many of the other Ducks, is a very pretty and ornamental bird, and more elegant, both in form and in its movements, than the common Wild Duck. The bill is black on the ridge and at the base, pale blue on the sides; the irides are dark brown; the head, chin,

upper part of the throat and of the nape rich brown, slightly speckled with a darker shade, and glossed in some lights with green and purple reflections; the lower part of the nape, the back, scapulars and flanks, as far as behind the thighs, minutely pencilled and streaked with zigzag black lines on a white ground; from the scapulars arise some narrow elongated feathers, black in the centre and edged with white on the outer and grey on the inner web; the lesser wing-coverts are a uniform grey and the greater the same, but tipped with pale chesnut; the primary quills dark brownish grey; the speculum on the secondaries glossed with reddish purple or green, according to the light in which it is seen; beyond this is a small patch of black, and the tips are white; the tertials are pointed, black in the centre, grey on the inner and nearly white on the outer edge; the tail-coverts ash-grey; the elongated feathers of the tail are very narrow and pointed and black in colour, the rest of the tail-feathers are dark in the centres, pale greyish, nearly white, at the edges; from the back of the head down each side of the neck to the breast is a narrow streak of white, the breast itself is white; the belly white, lightly pencilled with pale grey; the hinder part of the flanks white, tinged with pale buff; under tail-coverts black; legs, toes, webs and claws black. During the summer and autumn change the beautiful white streak down the sides of the neck is obliterated, the whole of the

head and neck becoming the same colour, brown, slightly speckled with black; the feathers on the back and scapulars are black, with pale margins, those on the flanks spotted black and pale grey, the black spots being in the centres of the feathers; the beak does not change its colour.* The bird in my pond is now (the end of September) just beginning to recover its ordinary plumage. The female has the head reddish brown; the neck paler brown, both speckled with very dark brown; the upper surface dark brown, nearly black, each feather margined with pale brown; there are no elongated tail-feathers, as in the male; the tail-feathers are dark brown, varied with pale brown.

The egg, as figured by Meyer, is a pale bluish green, something like that of the Wild Duck, but paler, and about the same size.

WILD DUCK, *Anas Boschas*. The Wild Duck is common throughout the greater part of the county during the winter, in such situations as suit its habits, and in certain localities a few may remain to breed—probably if undisturbed more would do so: as it is, the greater number depart in the spring. Mr. Darwin† seems to think, and probably rightly, that all our various breeds of tame Ducks are

* Mr. Bidgood has now a Pintail in his collection, just in this state of plumage, shot in the marsh this autumn (1868).

† 'Animals and Plants under Domestication,' vol. i.

derived from this species, and have been developed by man's selection during a long series of years: he also seems to think that the wild birds when kept in a state of partial domestication vary in several respects after two or three generations; in proof of which he quotes a paper by Mr. Hewitt, in the 'Journal of Horticulture,' to the following effect,—that after the third generation his birds lost their elegant carriage and began to acquire the gait of the common Duck; they increased in size in each generation and their legs became less fine; the white collar round the neck of the Mallard became broader and less regular, and some of the larger primary wing-feathers became more or less white. If this was always the case all our common and parti-coloured tame Ducks may easily be accounted for; but I have not found this to be so, as Wild Ducks have been kept in the pond here by my father and myself for certainly more than forty years, and no variation has taken place, nor has it ever been necessary to weed pied or parti-coloured birds: the only variation I have ever been able to observe is that the old Mallards lose the dark vinous colour on the breast, that part becoming the same as the rest of the under parts; but then I have shot a perfectly wild Mallard in exactly the same state, so that change is probably usual and only owing to age. I should say that these Ducks are not pinioned, and can hardly be said to be in confinement, as they fly

about as they please, make their own nests and bring up their own young, the only thing done for them being an occasional feed of barley, especially in hard frosts or very dry weather in summer, and a little barley-meal for the young. Probably if they were kept in a closer state of confinement the variation above mentioned would take place.

The Wild Duck seems to be rather an early breeder, the young broods generally making their appearance about the 12th or 13th of April. A variety of places are chosen for the nest—sometimes reeds, rushes or long grass near the pond; sometimes the cover of some bush, either near or far from the water; sometimes a hedge-row at a considerable distance from the water; sometimes thick ivy on the top of a wall, at a height of even eight or ten feet. Yarrell mentions an instance of a nest having been found in an oak tree, twenty-five feet from the ground, and another in a deserted nest of a Hawk; and, quoting Selby, he says, “A Wild Duck laid her eggs in the old nest of a Crow, at least thirty feet from the ground. At this elevation she hatched her young, and as none of them were found dead beneath the tree, it was presumed she carried them down in her bill—a mode of conveyance known to be frequently adopted by the Eider Duck.” The nest itself is not a very elaborate structure—only a few rushes, leaves and dead grass twisted together. When the nest is on the ground the parent bird is

very careful to hide the eggs with leaves and grass whenever she leaves the nest, and so well does she do this that her nest may easily be passed by without being seen, even when placed in a tolerably open situation.

The principal food of the Wild Duck is grain, seeds, worms, slugs, insects and small fish : amongst the vegetable part of its food it seems to prefer small water crowfoot, spring-water starwort, and the roots and stems of the common hornwort.* The stomach has also been found to contain sand, shells, sea-weed and potatoes — some of the latter still whole, and one of them a little more than an inch in diameter.† These birds seek for food mostly at night, setting out on the search late in the evening, and returning in the morning. My tame ones practice this habit with great regularity : setting off always a little before sunset, and spreading out through the grass-fields, they make a walking expedition, sometimes of considerable extent : when thus out they are very wild, and will not allow any one to approach within a hundred yards of them, all rising on the slightest alarm and returning to the pond, which is their usual home : when once there they are as tame as ever. In a wild state they set off on this expedition with about the same regularity, but

* 'Zoologist' for 1865, p. 9537.

† Id., 1866 (Second Series), p. 291.

occasionally they have a long way to fly to their feeding-grounds. At this time a good shot may often be had at them by any one who knows their usual line, and conceals himself till they approach near enough.

In plumage the male, or "Mallard," as it is generally called, differs much from the female, being much brighter and more beautifully coloured. The beak is yellow, tinged with green; the irides hazel; the head and neck glossy green,—immediately beneath this is a ring of white, which does not, however, quite meet at the back of the neck; the middle of the back is dark reddish brown; the rest of the back is white, minutely pencilled with black, giving it a grey appearance at a little distance; the scapulars are reddish brown, pencilled with black; lesser wing-coverts ash-grey, without the pencilling; the greater wing-coverts dusky, tipped with white; the primary quills dusky brown; the speculum on the secondaries rich glossy green or blue, according to the light in which it is seen—all the feathers are tipped with white; the tertials are grey, some of them shaded to reddish brown on the outer web; rump and upper tail-coverts glossy blue-black; immediately above the tail are two little curled-up black feathers; the tail-feathers are dusky in the centres, white on the edges; the breast vinous-red (this colour seems to be lost in very old birds); belly and flanks white, more minutely pencilled with black

than the upper parts, giving them the appearance of a lighter grey; vent white; under tail-coverts black; legs, toes and webs orange. In summer, from about the middle of July to the middle of September, the Mallard loses his beautiful plumage and puts on a much more sombre dress: the glossy green of the head and neck become a sort of greyish brown, and the finely pencilled feathers of the back and flanks change to a sort of mottled brown, something like those of the female, as does the vinous-red of the breast; the two curled feathers of the tail also are lost. Yarrell quotes a full account of this change of plumage in the Mallard from Waterton, who fixes the time of the commencement of the change as early as the 24th of May, and says that it lasts till about the 10th of October. I do not myself remember ever to have seen the change commence before the end of June or beginning of July, and now (the 28th of September) they have all assumed their proper colour again; not so, however, the Pintail and Wigeon, neither of which have yet recovered their plumage.* In the female the beak is darker than in the male, greenish black on the ridge and orange-brown on the edges and towards the point—the nail is black; the irides are brown; the head and back of the neck are pale yellowish brown, streaked with

* This change of plumage is common both to the Rouen Duck and to the Call Duck.

black; the feathers of the back, scapulars, rump and tail-coverts dark dusky, almost black, edged and marked with yellowish brown; the lesser wing-coverts uniform greyish brown, the greater are tipped with white; the rest of the wing is much the same as in the male; the tail-feathers are yellowish brown, marked with black and edged with dirty white; the chin is uniform yellowish brown, without marks; the breast, belly and the rest of the under parts yellowish brown, marked with black; under wing-coverts white; legs, toes and webs reddish orange. The young in their down plumage vary a little, some being mottled dark brown and pale yellowish brown on the upper parts, and others are nearly uniform black on the back. I am rather disposed to think that the dark ones are the drakes, but I have not been able to prove it satisfactorily.

The eggs are of a uniform dull pale greenish hue.

GARGANEY, *Anas Querquedula*. The Garganey or "Summer Teal," as it is often called, must be considered rather a rare spring and summer visitor to this county; the specimens which I have seen here have generally been killed about the end of March or beginning of April in the marsh, and brought to the market and bird-stuffer's shop at Taunton. Montagu says he has received these birds from the decoys in Somersetshire in the month of April. Yarrell seems to be of opinion that the specimens that occur in the spring are on their way to breed in

countries further to the south; a few, however, do remain to breed in England, and specimens occasionally occur in the autumn, and even in the winter. This bird does not appear to proceed very far to the north in its wanderings, not being included amongst the birds of Orkney or Shetland;* Captain Hadfield, however, in the 'Zoologist' for 1864 (p. 9169), mentions having seen a small flock of Garganey Teal on the north-east coast of Scotland, on the 14th of December.

This bird may easily be kept in confinement and becomes very tame; it may then be fed upon any sort of grain: in a wild state its food appears to consist of insects and their larvæ, small worms, small fry of fish, frogs and spawn, roots and shoots of aquatic plants, grasses and other vegetables of various descriptions, and grain.†

The place chosen for the nest appears to be much the same as that generally chosen by the Wild Duck, but I do not know that it ever selects the exalted positions sometimes resorted to by that bird.

Though not so brightly coloured as the Mallard or Common Teal, the drake is nevertheless a very beautifully marked bird. The bill is brown; the irides hazel; the top of the head and nape very dark brown with a few pale streaks; immediately

* Yarrell, vol. iii., p. 279.

† Meyer's 'British Birds,' vol. vi., p. 105.

under this from above the eye, and down the hinder part of the side of the neck is a streak of white; the cheeks, sides, and front of the neck are reddish brown, thickly streaked with white; the chin is black; back, rump and tail-coverts, and some of the scapulars, dusky in the centres, margined with palish hair-brown; from the scapulars arise some long narrow feathers which hang down over the wing,—these have a streak of white in the centre which is bordered with black, shaded to grey on the outer web; the lesser wing-coverts are pale grey; the greater coverts darker, tinged with brown and tipped with white; the primary quills dusky brown; the speculum on the secondaries small, and not very bright, green,—these feathers are narrowly margined with white, some of the tertials are dark brown and others pale grey margined with white; the tail the same as the primary quills; the breast is dark brown, almost black, thickly marked with semicircular bands of pale reddish brown; the flanks, thighs and vent white, pencilled with black; between the thighs and under tail-coverts is a narrow white band; the under tail-coverts white, spotted with black; legs, toes and webs greyish brown. The female has the head and back of the neck very dark brown, mottled with pale brown; just over the eye is a pale yellowish white streak; the cheeks and sides of the neck are pale whitish brown, streaked with dark brown; the feathers of the back, scapulars, rump and tail-coverts

dark brown, margined with pale whitish brown; lesser wing-coverts pale grey, but more tinged with brown than in the male; the greater wing-coverts dull greyish brown, tipped with white; the primary quills dusky brown; secondaries the same, tipped with white; tertials the same, margined with white; the chin uniform dull white, tinged with pale brown; the feathers of the breast and flanks dark brown in the centres, margined with the same colour as the chin; under tail-coverts the same light brown, spotted with dark brown.

The egg is a uniform buff colour, about the same size as that of the Teal.

TEAL, *Anas crecca*. The Teal is a tolerably common visitor to this county in winter, at which time it is to be found in some of our larger ponds in considerable flocks, and singly or in smaller flocks in the various pools and streams: it also frequents the coast and the tidal rivers. Yarrell says it makes its appearance about the end of September, which would seem to be about the time of its arrival here, as I have occasionally shot it on the 1st of October: it returns northward to breed in the spring; a few, however, remain in England throughout the year and breed, but I am not aware that they do so in this county.

This bird is easily kept in confinement, and has bred in the Zoological Gardens, Yarrell says, regularly for five seasons in succession, though restricted

to a very small pond, with a margin of thick high grass and low shrubs.

In its wild state the Teal is said to breed in the long rushy herbage about the edges of lakes, or in the boggy parts of upland moors. The nest is formed of a large mass of decayed vegetable matter, with a lining of down and feathers.*

The food of the Teal consists of seeds, grasses, water plants, and insects in their various states.† In confinement it may be kept on barley and other grain.

This is the smallest and one of the most beautiful of the Ducks. The beak is nearly black; the irides hazel; the forehead, top of the head, cheeks, back of the neck and throat rich reddish bay; round the eye, reaching to the back of the neck, is a largish patch of glossy green, broadest immediately behind the eye, and narrowing to nothing at the back of the neck; round the base of the upper mandible, and running from thence to the green patch—the fore part of which it surrounds both above and below—is a narrow line of white; back, scapulars, flanks and thighs pencilled with zigzag lines of black on a white ground, giving the whole a greyish appearance; from the scapulars lying backwards are some longish feathers of a rich buff, and others close to them of black; rump and tail-coverts greyish brown, some of

* Yarrell, vol. iii., p. 284.

† Id., p. 283.

the tail-coverts much pointed and margined with pale yellowish brown; lesser wing-coverts darkish grey; the greater coverts of the secondaries tipped with white, except a few nearest the body, which are tipped with pale chesnut; the primary quills dark greyish brown; speculum on secondaries velvety black, glossed with green — on those nearest the body a very bright glossy green; tertials, the outer web of the one next the secondaries velvet-black, the rest like the primary quills; the tail the same, the feathers much pointed, the breast buff, spotted with black; belly paler, nearly white, and not spotted; vent black; central under tail-coverts black, the rest pale buff; legs, toes and webs brownish grey. The male Teal has the same change of plumage in the summer as the Mallard, and becomes at that time much more like the female. The female has the head dark brown, streaked with pale and reddish brown; cheeks and sides of the neck pale whitish brown, spotted with black; the back and scapular feathers dark brown, marked and margined with whitish and reddish brown; the wings are much the same as in the male; the chin pale whitish brown; throat the same, speckled with black; breast, flanks and thighs dark brown, mottled with pale brown; belly nearly white; under tail-coverts the same, spotted with dark brown.

The eggs are of a uniform white, tinged with buff.

WIGEON, *Anas Penelope*. The name "Wigeon" is generally in this county applied indifferently to the present species, the Pochard and the Tufted Duck; in some places these two last are distinguished as "Cur Wigeon:" in this immediate neighbourhood these two species occur more frequently than the Wigeon, but about the coast and in some parts of the marsh the Wigeon much outnumbers the others. Montagu says in his time more Wigeon were caught in the decoys of Somerset and Devon than Duck, Teal and all other wild fowl collectively. It is a winter visitor, making its appearance about the middle of October, and departing about the beginning of April to its northern breeding grounds: a few, however, are known to stop short and breed as far south as the North of Scotland.

The Wigeon is easily kept in confinement, but has not been known to breed,* which I am rather surprised at, as they certainly pair, and the drake is the most jealous and irritable little fellow, whistling and flying at any male Duck of any species that

* The female Wigeon in my pond is now (July, 1869) sitting on five of her own eggs. The nest is in a field of mowing grass near the pond: it is a slight hole scratched in the ground, lined with a few long bents of grass and a great deal of down plucked from the bird's own body: it very much resembles the nest of the common Muscovy Duck. The eggs are rather smaller than those of the Wild Duck, and are cream-coloured.

presumes to approach his duck too closely. The one in my pond has a terrible time of it throughout the spring, endeavouring to keep off the Mallards, who constantly make advances to his duck, especially when their own ducks are sitting.

The nest of a Wigeon which was found by Mr. Selby, on one of the islands in a lake in Scotland, "was placed in the heart of a large rush-bush, and was made of decayed rushes and reeds, with a lining of warm down from the bird's body."

The food of the present species consists almost entirely of grass, which, to judge by the tame ones, it eats most greedily, as these spend nearly the whole of the day in cropping the short grass on the lawn. Meyer adds aquatic insects and larvæ, worms and small Mollusca, rarely the small fry of fish and frogs: he also says it occasionally eats grain, but that it is no favourite food of the Wigeons, which seems certainly to be the case: I have known my tame ones reduced to eat grain with the other wild fowl during deep snow, when they could get no grass, but at other times they do not appear to care at all about it.

The Wigeon is a fine showy bird, and certainly a great ornament on a pond. The drake has the beak bluish lead-colour, tipped with black; irides dark brown; forehead and top of the head white, very slightly tinged with buff; the whole of the face, back of the head, and neck all round, rich chesnut, slightly

speckled with minute spots of black; the back, scapulars and rump are finely pencilled with black and white, the pencilling much finer on the rump; the lesser wing-coverts are white, the greater tipped with black; the primary quills and the tail-feathers brownish grey; the speculum on the secondaries glossy green, the feathers tipped with black,—one feather nearest the body is white; the tertials are black on the outer web, edged with white, dark grey on the inner webs; the breast is pale pinkish red; belly and vent white, slightly pencilled with black; the tail-coverts all round are black; the legs, toes and webs dark brown. The male Wigeon, like so many others of this family, changes its plumage very considerably in the summer, but does not approach so nearly to the plumage of the female as some of the others: the whole of the head, neck, breast and flanks become at this time a rich rusty red, which colour seems more or less to pervade the whole of the body, except the wing-coverts and the belly, which remain quite white. My tame one is now (the end of September) just beginning to reassume its ordinary plumage, the conspicuous white mark on the head making its appearance first. The female the bill bluish black; irides brown; the head and neck are much mottled with dark brown and reddish brown; the back and rump dull dark brown; the tail-coverts the same, margined with white; the scapulars the same as the back, but marked with

reddish brown; the lesser wing-coverts dull brown, slightly margined with pale brown; the greater wing-coverts are tipped with white; tertials dusky brown, margined with white; the chin and throat rather paler than the head; breast, flanks and under tail-coverts dull yellowish brown, some of the feathers margined with a paler shade; belly yellowish white.

The eggs are said to be smaller than those of the Wild Duck, and of a rich creamy white colour.

COMMON SCOTER, *Oidemia nigra*. The Common Scoter is by no means so numerous on our coast as it is on the south coast of Devon, where I have seen it in the late autumn in very large flocks: it remains on that coast all through the winter, and I have seen an occasional one as late in the spring as May.

I have never myself seen this bird on our Somersetshire coast, the Scaup Duck, which appears to me much more common there, being generally called the "Black Duck." I have, however, seen a few specimens at Mrs. Turle's, which had been shot in the neighbourhood of Burnham. Montagu says of it, "Mr. Anstice informs us that the Scoter is occasionally taken in the river Brue, near Bridgwater, in Somersetshire, in the winter, but more commonly in the moulting season, having cast so many feathers of their wings as to render them incapable of flight: in this state they frequently get within the nets in shallow water, are surrounded at the ebbing tide, and cannot escape." Some of those I shot on the south

coast of Devon were in this state of moult, and had lost so many of their quill-feathers that they could not fly, and might, by hard work and perseverance, have been rowed down and taken alive: many, however, in the flock could fly perfectly—every one of the black males: probably all those that could not were birds of the year. It is certainly, as Montagu observes, strange that these birds and some other Ducks should moult so many quill-feathers as to be incapable of flight, and what appears to me to increase this strangeness is the peculiar time at which they are found in this state,—immediately on their arrival on our coast,—and it would certainly appear probable that very many of them must have performed the whole or part of their migratory journey by water without much help from their wings, as I found them in this state on the South Devon coast in October and November, which is about the time of their first arrival.

The Scoter is a very expert diver, and will remain under water for a long time. A wounded bird often gives a hard chase, and if allowed to get to windward of the boat will frequently escape, especially if the water is a little rough, so as to increase the difficulty of seeing it.

The food of the Scoter, which consists mostly of shell-fish, such as mussels, and other marine animals and insects, is mostly obtained by diving: this food causes the flesh to be so rank and fishy that in Roman

Catholic countries it is considered as fish, and is allowed to be eaten on fast-days. As may be supposed from the nature of its food, this bird does not often make its appearance on inland waters: Yarrell, however, says that one specimen has been taken on a pond in the neighbouring county of Wilts, and another near Farnham, in Hampshire.

These birds are not known to breed in England, but repair to more northern latitudes. The nest is said to be made of grass and other vegetable matter mixed, and lined with a quantity of down from the bird's own body.

The plumage of the male Common Scoter is a uniform velvety black all over. The irides are dark brown; the beak is black, except a small space in the centre of the upper mandible, which is bright orange; the legs, toes and webs are black: as in all the diving Ducks, there is a sort of partial membrane or web to the hind toe. There does not appear to be much difference between the young males and the females: all those shot by me in Devonshire in October and November, except the adult males, were nearly the same: the patch on the beak was much lighter; the top of the head and nape were dark brown; chin, cheeks, sides and front of the neck pale greyish brown; all the upper parts dark dusky brown, many of the feathers margined with pale grey or white, some specimens much more so than others; breast and flanks dull brown, many

of the feathers margined with white; rest of the under parts the same, but with more white.

The eggs are said to be of a pale buff, tinged with green.

POCHARD, *Fuligula ferina*. The Pochard is a much more common bird in our county than the last-mentioned species: it is a constant winter visitor to our coast, and it also frequently makes its appearance on the ornamental ponds, in the stagnant pools, the larger rhines and ditches in the marsh, and on the river. By gamekeepers and others about here the Pochard is invariably spoken of as the "Wigeon." It is easily kept in confinement, and lives very contentedly with the Wild Duck and other ornamental wild-fowl; it requires very little pinioning to keep it at home: the wings being very short and small for the size of the body, a very little less keeps the bird from rising: in its wild state it does not do this very easily, but when once up it can fly for a very long distance and at a moderate pace. On land the Pochard seems much out of place, as do all the diving Ducks, its walk being a most uncomfortable waddle; I have, however, seen my tame ones walk a considerable distance in the evening in search of food.

The Pochard seeks much of its food by diving, at which it is very expert, and will remain under water for a long time. According to Meyer its food consists of roots, seeds, blossoms, stalks and young

shoots of water-plants, small frogs, insects and small fry, spawn (when it can get it) of sea-fish, Crustacea and Mollusca: when living on this latter diet its flesh is not as good eating as it is at other times, being then a little too like that of the Common Scoter.

A few of these birds are said to breed in some counties in England. The nest is placed amongst reeds, rushes and other coarse herbage, on the borders of inland waters. Meyer says that in localities that suit the species great numbers of nests are placed near each other, although each nest is placed out of sight of the others. I do not know that the Pochard breeds in confinement, but I should think it would do so if it had suitable accommodation. My duck and drake certainly paired, and I had great hopes of a brood, but none made its appearance: I rather think the eggs must have been laid in the water.

In plumage the Pochard is rather a handsome bird. The beak is lead-blue, except at the point and at the base, which are black; irides red; the head and neck are reddish chesnut, the breast and a broadish collar on the back of the neck are black; the back, scapulars and tertials are white, minutely pencilled all over with black; the wing-coverts are dark grey, minutely freckled with white; the quills are dusky, tinged with brown; secondaries lighter, and tipped with white; rump and upper and under

tail-coverts black, the tail dark greyish dusky ; flank the same as the back ; belly very light grey, nearly white ; legs and toes bluish grey, webs black. The female differs considerably and is not nearly so handsome : the bill is black ; irides brown ; the head and neck dull rusty brown, except a patch between the beak, the eye and the chin, which is yellowish white ; back and scapulars dusky, freckled with grey ; wing-coverts dusky ; secondaries grey, slightly tipped with white ; rump and tail-coverts dusky ; breast brown ; belly and flanks grey, lightest in the middle of the belly ; under tail-coverts very dark grey, slightly freckled with white. Young males are at first like the females, but gradually change after the first autumn moult.

The egg, according to Meyer's picture, is pale greenish blue ; Yarrell says Hewitson has coloured it buffy white.

SCAUP DUCK, *Fuligula marila*. The Scaup Duck is a tolerably numerous winter visitor to our coast, arriving about November. It seems to confine itself much more to the sea and the mouths of tidal rivers than the Pochard, seldom or never making its appearance in our inland ponds and other waters. Whether this bird ever remains to breed in England seems doubtful. Mr. Cordeaux* mentions having seen an occasional stray bird in Lincolnshire as late

* 'Zoologist' for 1867 (Second Series, p. 811).

as the 24th of May, and adds that a labourer employed on the embankments on the coast assured him he had seen a pair of Scaups and their young about that same place every year, but, as Mr. Cordeaux adds, such information is not always to be trusted. There seems to be one instance recorded of this bird breeding in the North of Scotland, Mr. Selby having found a female bird and a young one on a small loch in Sutherland.* The nest is said to be generally placed amongst aquatic herbage or large stones, near the edge of fresh water: little or no nest is made, but the eggs are covered with a quantity of down.†

The Scaup Duck is an expert swimmer and diver, and, like the Scoter, a wounded bird will occasionally give one a long row before it can be brought into the boat. It seeks its food for the most part under water: this consists of small fish, shell-fish, small crabs and mussels, aquatic insects and marine plants; it is consequently not particularly good eating. It is easily tamed and kept in confinement, and may be fed on seeds and grain, like other wild-fowl. I do not think it has been known to breed in confinement.

In its general appearance the Scaup Duck, at a little distance, is like a Pochard, with a black instead

* 'Zoologist' for 1867 (Second Series, p. 878).

† Yarrell, vol. iii., p. 346.

of a red head. The bill is pale blue, the nail black; irides yellow; the head and neck are black, glossed with green; the breast and collar at the back of the neck black; the back and scapulars white, pencilled with black (rather more boldly so than the Pochard); the lesser wing-coverts are black, minutely pencilled with white; the greater wing-coverts and tertials are black, sparingly speckled with white; rump and upper tail-coverts black; primary quills black, tinged with brown; secondaries white, tipped with black, forming a white speculum; tail dark greyish dusky, flanks and belly white; under tail-coverts black; legs and toes bluish black; webs still darker. The female differs considerably: there is a white patch surrounding the bill, broadest on the upper parts (Yarrell seems to say that this is only the case in old birds); the head and neck are dusky brown; breast and a collar at the back of the neck brown—the feathers on the lower part of the breast are margined with white; back and scapulars dark dusky, freckled with white; lesser wing-coverts the same, but with less white; the greater coverts dark lead-colour; there is a white speculum on the secondaries, the tips of the feathers lead-colour; primary quills and tail dark dusky, tinged with brown; belly and flanks white, hinder part of flanks and under tail-coverts dark dusky, some of the feathers freckled with white. The young birds are much like the females.

Yarrell, quoting Hewitson, says the eggs are of a uniform clay-brown colour.

TUFTED DUCK, *Fuligula cristata*. The Tufted Duck appears to make more frequent visits to our inland waters than any other of the diving Ducks, except perhaps the Pochard; as far as my own experience goes I have met with the present species in such situations much more frequently. About here, like the Pochard, it generally goes by the name of the "Wigeon." It is easily kept in confinement and is very conspicuous and ornamental; it has also been known to breed several times in confinement in the Zoological Gardens, though in a wild state it seems very rarely, if ever, to breed in any part of Britain. In a neighbouring pond a wild female Tufted Duck remained for a long time into the spring in company with two pinioned males, but did not remain to breed.

Meyer says the nest is usually placed in a hollow on grassy ground, or under shelter of a stone or stump of a tree, or of some vegetable production, at a distance of from sixty to a hundred yards from the water: it is made of stalks and grasses carelessly put together.

The food of the Tufted Duck, which is mostly obtained by diving, consists of shell-fish, small frogs and their spawn, aquatic insects and the roots, buds and seeds of aquatic plants. In confinement it will also eat grain, and both this bird and the Pochard

may be easily got to come to the call and dive for grain or bread.

The Tufted Duck has the bill pale blue, the nail black; irides bright yellow (in consequence of which it is occasionally mistaken for and called the "Goldeneye"); the head and the long feathers at the back of the head forming the tuft are black, glossed in some lights with purple; the breast and all the upper parts are black; there is, however, a white speculum on the secondary quills; the belly and flanks are white; the back part of the thighs, flanks and under tail-coverts dusky; the legs and toes are dark blue; the webs black. In the female the head, neck and all the upper parts are dark dusky brown; there is a white speculum on the secondary quills, as in the male; breast brown; belly and flanks dullish white; under tail-coverts and back part of the flanks brown, mixed with white.

The eggs are said to be rather pointed at one end; of a pale buff colour, tinged with green.

GOLDENEYE, *Fuligula clangula*. This beautiful Duck is not of very common occurrence in our county, and those that do occur are generally young males of the first year or females. It seems to make its appearance quite as frequently on our inland waters as on our coast: it is only a winter visitor to these parts and does not, I believe, remain to breed in any part of England.

The Goldeneye is a very expert swimmer and diver, so much so that, like many others of this family, it is often a work of considerable difficulty to recover a winged bird if it falls into the water. In the pages of the 'Zoologist' Dr. Saxby gives many accounts of his difficulties in getting wounded birds, and takes the opportunity of expressing his disbelief in a notion that is, to a certain extent, prevalent—that these birds when wounded dive and hold on to the weeds by their mouths till they drown themselves. In this disbelief I quite agree with him: in inland waters where there are rushes and weeds these birds—and even the Wild Duck, which is not nearly so much of a diver—dive into some weedy part, where they lie perfectly concealed, allowing nothing but a very small portion of the bill, just enough to admit air, to appear above water: if there are no weeds I have known them conceal themselves in the same way under cover of any overhanging grass or unevenness of the bank, and so quietly do they rise for the purpose, putting their bills above water, that even in a still quiet pond hardly any circles are made on the water by this operation to attract attention. In the open sea, perhaps, it is more difficult for them to escape in this way, especially on a calm day; but still I am sure they do so occasionally, making use of any little bit of floating sea-weed to conceal themselves, or even without any such help, if they make a good long dive, they may

still escape, so small an object as the bill of a bird being difficult to distinguish at any considerable distance, especially if the bird happens to get just in the glare of the sun upon the water: of course in rough weather the difficulty in seeing the bill of the bird is considerably increased. In no other way can I account for their sudden disappearance; just when I have almost been in the act of putting out my hand to take a wounded bird into the boat there is a splash and a dive, and sometimes the bird is never seen again: it certainly does not die under water, or it would rise to the surface and be easily seen.

The food of the Goldeneye seems to consist of small fish, shell-fish, small frogs and spawn, aquatic insects of various sorts and larvæ, also the roots, buds and seeds of aquatic plants. It seems to have a tolerably good appetite; for, speaking of this bird, a correspondent of the 'Zoologist' says he found in the stomach of one, nine young eels, forty-eight *Lymnæa peregra*, three *Lymnæa stagnalis* (two well-known species of fresh-water shells), six caddis-worms, an *entrée* of fresh-water shrimps, with fixings of earth-worms, larvæ of gnat, larvæ of dragon-fly, and grit. Grit and small sand are often found in the stomachs of these birds, probably swallowed with the food; larger stones are also found,—these probably are swallowed for the purpose of assisting digestion.

The Goldeneye is said generally to place its nest in a hole in a hollow tree, if it can find one. So fond are these birds of breeding in holes, that Yarrell says the inhabitants of Norway and Lapland place boxes with an entrance-hole in the trees on the banks of rivers and lakes in which the Goldeneye lays its eggs, which of course are robbed; but in spite of this the birds constantly return to the same place. Meyer says the nests are occasionally placed amongst rushes and coarse grass. Like many other of the swimming birds the Goldeneye appears to line its nest with down from its own body.

The Goldeneye is easily kept tame, and the male bird, being one of our handsomest and most conspicuous water birds, is a great ornament to a pond: the bill of the adult male is bluish black; the irides golden yellow; the head and neck dark glossy green; behind the base of the beak on the side of the face is a conspicuous white spot; the lower part of the neck, the breast, scapulars, belly and under tail-coverts are white; from the scapulars are some rather longish feathers hanging down over the wing,—the hindermost of these are white with a black margin on the outer web, the more forward ones are white in the centre, with two black margins; the back, rump and tail-coverts are black; the tertials are black, as are some of the lesser wing-coverts; the rest of the wing-coverts and the secondary quills are white; the primary quills and some of their coverts

and the bastard wing are black; the tail is dark dusky, nearly black; the hinder part of the flanks from behind the thighs to the tail-coverts are mixed dusky and white; the legs and toes are yellow, the webs black. The female has the bill brownish black at the base and orange-brown towards the tip; the head and neck are dull brown; below this is a small band of white, mixed with grey, especially at the back of the neck; the back and scapulars are black, every feather margined with lead-grey; some of the lesser wing-coverts are white, and some black, tipped with white; the greater wing-coverts are white at the base, black towards the tips; the primaries and tertials are black; the secondaries white: the rump and tail-coverts are black; tail-feathers dusky; the breast and flanks lead-grey, each feather margined with white; belly and under tail-coverts white; back of the thighs dusky. The young males are like the females, which increases the difficulty of identification, as the birds in this plumage were found to be both males and females; consequently they were considered a distinct species, to which the name "Morillon" was given. According to Yarrell, the young males begin gradually to assume their proper plumage after the first six months.

According to Yarrell the eggs are green. Meyer's plate makes them a pale green, rather paler than those of the Wild Duck.

SMEW, *Mergus albellus*. The small family of Mergansers differ slightly from the true Ducks, especially in the formation of the beak, which is much narrower towards the point; the upper mandible is much hooked at the point or nail; the bill is also thickly serrated or toothed like a saw, which gives these birds a great facility in holding their slippery prey.

The present species, the Smew, the smallest of the Mergansers, not being larger than a Wigeon, is only an occasional winter visitor to our county, as it seems to be generally to England, and of these occasional visitors the young males of the first year and the females are the most common; full plumaged old males may certainly be considered very rare. Mr. Haddon has one beautiful specimen, shot by himself on the river near Taunton.

The Smew is not known to breed in any part of Britain; indeed very little seems to be known of its breeding habits anywhere. Meyer, however, says the nest is composed of dry grasses and lined with feathers from the bird's own body, and that it is either placed on the ground near water on some small island or in a hole in a tree.

This bird is an expert diver, and in this manner obtains most of its food, which consists of fish, Crustacea, and small frogs, and but very rarely, according to Meyer, of vegetable matter. It seems to be rather a voracious feeder, for as many as five

small roach are said to have been found in the stomach of one.*

The description of Mr. Haddon's bird, mentioned above, is as follows:—The bill is bluish lead, the nail horny and white; irides reddish brown; from the base of the bill on each side to and under the eye is an irregular circular black patch; there is also a very narrow line of black over the eye; the forehead, top of the head and some elongated feathers forming a crest at the back of the head, the neck all round, the breast and all the under parts, pure white; on the back of the head immediately under the crest is a patch of black; the back and a very distinct narrow streak reaching from the fore part of the back half way down the sides of the breast are glossy black; rump and tail-coverts grey; tail grey, but darker; scapulars white; between the wing-coverts and the scapulars are some long black streaks; the lesser wing-coverts near the point of the wing black; the rest white; the greater coverts are black, tipped with white; the secondaries the same; the primaries black, inclining to grey towards the tip; the flanks and the back of the thighs to the tail-coverts white, minutely pencilled with black; from just under the fore part of the wing towards the belly are some narrowish black markings; legs, toes and webs bluish and lead-grey. There was a

* 'Zoologist' for 1864, p. 8962.

male Smew kept for some time in the ornamental waters in St. James's Park, London, and Yarrell says that before the middle of July it regularly assumed the plumage of the female, reassuming its own plumage again at the autumn moult. The female differs exceedingly in plumage: there is a dull black mark between the beak and the eye; the rest of the head and back of the neck are reddish brown; the back is nearly black, each feather margined with lead-grey; the rump and upper tail-coverts are black, some of the feathers margined with lead-grey; the lesser wing-coverts outside and at the point of the wing black, those inside white, making a large white patch on the wing; the greater coverts black, tipped with white; secondary quills the same, the two rows of tips making two white lines on the wing; primary quills black; the chin and throat are white; the breast is white, clouded (especially on the sides) with lead-grey, as are the hinder parts of the flanks; the rest of the under parts are white. One of my specimens has some of the greater wing-coverts, and of the secondaries furthest from the body, mottled with reddish brown, as are some of the scapulars. As in the case of the Goldeneye, the difference of plumage of the old males from the young males and females has led to some confusion, the birds in this plumage being the "Redheaded Smew" or "Weesel Coot" and the "Lough Diver" of Bewick.

Yarrell says the eggs are of a uniform rich buff.

REDBREASTED MERGANSER, *Mergus Serrator*. As the Rev. Murray A. Mathew informs me that an immature specimen of this, with us, rare bird was killed by him at Weston-super-Mare, I have to include it in the list of Somersetshire birds. Other specimens may have been obtained, especially immature ones, as they might easily have been mistaken for immature Goosanders. It has occurred on the opposite side of our channel, at Swansea, as well as in the neighbouring counties of Devon and Dorset. In the more eastern counties the Redbreasted Merganser is much more common, and breeds in them in such places as suit its habits, as it also does in many parts of Scotland. More of these birds appear to be found in England in the winter than in the breeding season: we must, therefore, consider it, partially at all events, a winter visitor.

Dr. Saxby, writing from Shetland, in the 'Zoologist' for 1864 (p. 9243), describes the nests of these birds as follows:—"Although they often lay amongst long grass they seem to prefer the shelter of a roof of some kind, and thus it is that the eggs are most commonly found under rocks, in rabbit-burrows, and even in crevices in old walls; but, whatever may be the situation chosen, the nest always consists of a hollow scraped in the ground, and lined to a greater or less extent with down, feathers and dead plants, the amount of material being increased as incubation proceeds."

The food of the Redbreasted Merganser consists of small fish, water beetles, the larvæ of insects, worms, and sometimes frogs.* Montagu mentions having found a bee in the œsophagus of one of these birds.

The adult male is one of the handsomest of our British Ducks, most of which it exceeds in size, approaching more nearly to that of a small Goose—say the Brent. The bill, like others of this family, is much serrated. “The nail of the upper mandible is also much curved downwards; the bill is of a dark reddish brown, except the edges, which are of a brighter red, the under mandible is wholly red; irides red; all the head and the upper part dark but shining green, the feathers on the crown and occiput elongated; middle of the neck all round white, except a narrow line of black descending from the occiput to the upper part of the back, which, with the shoulders, is also black; the short scapulars white, those more elongated are black; before the point of the wing on each side are several roundish white feathers, margined with broad and rich velvet-black; point of the wing dark brown; small wing-coverts white; great coverts and secondaries black at the base, the outer halves white, forming with the small coverts three conspicuous white bands on the wing; primary quill-feathers

* Meyer's ‘British Birds,’ vol. vi., p. 180.

brownish black; tertials white, edged with black; lower portion of the back, the sides, flanks, rump and upper tail-coverts grey; tail-feathers stiff, rather pointed, and of a uniform brownish ash-colour; lower part of the neck on the front and the sides pale chesnut-brown, streaked and otherwise varied with black; breast, belly and under tail-coverts white; legs and toes reddish orange; webs dark reddish brown. The females are rather smaller than the males, and have the head and neck behind reddish brown, darkest on the crown of the head, the occiput feathers elongated; all the back, scapulars and small wing-coverts umber-brown; greater coverts and secondaries dark brownish black, ending with white, forming two white bands: primaries and tertials dark brownish black; upper tail-coverts and tail-feathers ash-colour; neck in front mottled with reddish and pale brown on a white ground; all the under surface of the body white. Young males resemble the female during their first winter.” *

Yarrell also says the eggs are of a rich reddish yellow or fawn-colour.

GOOSANDER, *Mergus Merganser*. This species, the males of which nearly, if not quite, equal those of the Redbreasted Merganser in beauty, is a rather more common visitor to our county than that bird. I have seen several specimens of immature males

* Yarrell, vol. iii., p. 396.

and females at Mrs. Turle's shop, which had been shot in the marsh and brought to her for preservation. A very fine old male bird in my collection was shot in the marsh, not very far from Taunton, by an innkeeper of that town, in the middle of January, 1867. Yarrell says of these birds that they are rare visitors to the South of England, but that they have been killed in hard winters in Cornwall, Devonshire and Dorsetshire: for my own part I do not consider them such rare visitors to the south of Devon, for I have seldom made a winter birding expedition to Exmouth without seeing at least one or two small flocks of these birds, even though the weather was not particularly severe; but on that open water they were excessively wild, and I never got a chance of having a shot at them. They seemed generally to keep in small flocks, some of them constantly diving for food, which appears to consist almost entirely of fish: amongst fresh-water fish trout and roach have been mentioned, in the pages of the 'Zoologist,' as having been found in the throat of the Goosander. It appears to be a more truly migratory species than the Redbreasted Merganser, not remaining to breed in any part of England, or I believe in Scotland, south of the Orkneys and Shetlands.

According to Yarrell, this bird is very fond of selecting the hollow trunk of an old rotten tree as a place for making its nest, and this propensity seems

to be taken advantage of by the Laplanders, as in the case of the Goldeneye before mentioned, for the purpose of procuring the eggs. When stumps of trees are not to be found the nest is placed amongst stones, in long grass or under cover of bushes: it is made of a mass of grass, roots, and other matter, mixed and lined with down.*

The adult male is certainly a splendid bird, considerably exceeding in size the Redbreasted Merganser. The bill is vermilion-red, the nail and a ridge on the upper mandible black; irides red; head and neck black, glossed with green and purple, according to the light; a collar at the back of the neck, the breast and all the under parts are a rich buff, tinged with salmon-colour;† the higher part of the back and some of the scapulars, and of the tertials nearest the body, are black; the rest of the scapulars and tertials are the same colour as the under parts; the lesser wing-coverts nearest the body are black, margined with white; all the rest of the lesser coverts, and all the greater, are white, except a few

* Yarrell, vol. iii., p. 400.

† In stuffed specimens this beautiful delicate colour generally fades to white. I have managed to preserve the original colour pretty well in my bird, as I always keep the blind and shutters closed in my bird-room, so as to exclude the daylight as much as possible, and I find this precaution keeps the colours of all the birds much fresher and brighter than is generally the case in collections of stuffed birds.

of the outside coverts of the primaries, which are black; primary quills black; secondaries white, some of them very narrowly edged with black; lower part of the back, rump and tail-coverts bluish grey, with a dark streak on the shaft of each feather; tail rather a darker grey; the feathers at the back of the thigh to the tail-coverts pale buff, pencilled with black; legs and toes orange-red; webs rather darker. The females and young males have the head and upper part of the neck chesnut; back and all the upper parts slate-grey; wing-coverts rather paler; secondary quills white; primaries black; chin white; the breast and all the under parts the same colour as those parts in the males;* sides of the breast and flanks mixed with slate-grey, rather paler than on the back. In this plumage the Goosander is the "Dun Diver" or "Sparling Fowl" of Bewick. The young males may always be distinguished from the females by passing the fingers down the neck, as they have two enlargements in the windpipe, which may be easily felt, and which the females do not possess.

This is the last of the Anatidæ or Ducks which I am able to mention. They are a very beautiful

* Yarrell says of these parts "tinged with buff;" but in all the recently-killed specimens I have seen they are nearly as richly coloured as in the males.

and interesting family, but the greater part of them are not so intimately connected with man as many of the other families, and probably do not do him so much good, nor can they be accused of doing him so much mischief: that, however, they do both good and harm to a certain extent must, I think, be apparent to anyone who carefully considers the food of the various species; for instance, some of the Geese and the Wigeon, living to a great extent on grass and young growing corn, must, where they are in considerable numbers, do a certain amount of mischief; many also, especially of the diving ones, destroy a good deal of fish-spawn; a few fish also fall a prey to them, but not in sufficient numbers to be worth consideration: on the other hand, slugs, snails, caterpillars, flies, beetles, and other insects and larvæ, inhabiting both land and water, constantly fall a prey to them, and form a very considerable portion of their food. The greater part of these birds are also themselves useful as food, the flesh of many of them being excessively good, and much esteemed for the table: others, especially the more sea-going ones, are not so good, the flesh being rank and oily, and having "an ancient and fish-like smell,"—indeed, so fish-like in some of the species that, as I mentioned in the case of the Common Scoter, it is considered by the Roman Catholics as fish, and allowed by them to be eaten on fast-days.

Family COLYMBIDÆ.

The Colymbidæ or Divers may be divided into two families, the Grebes and what may be called the true Divers. The Grebes are separated not only from their near relations, the Divers, but from all the rest of the birds in this great Order, by the formation of their feet, which are not fully webbed, like the others, but much more resemble the lobe foot of the Bald Coot, the membrane, however, in this case reaching the whole length of the toes, without being indented at the joints as in that bird: in other respects they very much resemble the rest of the Divers. Of the Grebes I can include three out of the five British species, and of the true Divers two out of the three, making five Somersetshire species out of the eight British Colymbidæ.

GREAT CRESTED GREBE, *Podiceps cristatus*. The present species, the Great Crested Grebe, can only be considered a rare accidental visitor to our county. There are two specimens in the Museum at Taunton, one presented by the Rev. Gerald Carew at the same time as the Osprey, before mentioned (*ante*, p. 4), and probably also shot in the ponds at Chargot; and another, a young bird of the year, in the collection formerly belonging to the late Mr. Beadon, and said, in his note-book, to have been killed in West Sedgemoor when it was much flooded. Mr. Sanford

has also one in his collection, which was shot on the river at Ninehead, on the 20th of March, 1826. The Rev. Murray A. Mathew also informs me that a specimen of an immature bird came under his notice at Weston-super-Mare. These are all the Somersetshire specimens I have at present been able to hear of.

Although this species is at present resident and breeds in many counties in England, it will in all probability soon cease to do so if the ladies continue their present ruthless persecution of these birds for ornaments for their hats and muffs—a persecution which, if persevered in to its present extent, will soon make not only the Grebes but many of our rarer and more interesting birds perfectly extinct.

The nest, according to Montagu, is large, and composed of a variety of aquatic plants: it is not attached to anything, but floats amongst the reeds and flags, penetrated by the water.* Yarrell says the parent birds are very careful of their young, taking them down with them when they dive. They are very expert at diving, which they practice both for the purpose of obtaining food and avoiding danger: so quick are they at it when conscious of danger that it is very difficult to get a shot at one of them. They do not make a sort of jump out of the water to turn their heads down, as the Shags and

* Montagu's Dictionary, by Newman.

many of the diving Ducks do, but these birds and all the Colymbidæ seem to me, when diving to avoid danger, merely to put their heads under water and sink out of sight and shot, and sometimes do not come up again till they have got two or three hundred yards away. The present species, however, after a dive or two generally takes to the wing if pursued, and then, unless he rises within shot of the boat, it is all over with the chase.

The food of the Great Crested Grebe consists almost entirely of fish, frogs and tadpoles. Yarrell says the parent birds usually feed their young with young eels. It is a curious fact that in the stomach of all the Grebes a quantity of feathers is almost always found. How the feathers get there does not appear at present to be perfectly ascertained: they are not swallowed with their food, as they do not appear to take any feathered prey: the most probable supposition seems to be that they are swallowed by the bird accidentally when preening its feathers: neither does it appear to be quite certain what becomes of these feathers—whether they pass through, or are rejected in pellets, as is the case with Hawks and some other birds that live on feathered prey.

The Great Crested Grebe is at all ages a very peculiar-looking bird. In the adult the bill is brownish red; irides red; the top of the head and the long feathers making the ear-tufts are dark

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dusky, nearly black; the face and chin white; there is a frill of long feathers all round the face, bay at the base and shaded to black at the tip; back of the neck, back and all the upper parts dull dusky brown, some of the feathers margined with pale ash-grey; the wing-coverts are without the margins; the secondary quills are white; primaries dusky brown; the fore part of the neck, the breast and belly are silky white; the flanks and thighs mixed bay, dusky and white; the tail—if such it can be called, for it is very rudimentary—is the same colour as the back; the legs and toes are dark on the outer surface and pale yellowish green on the inner. The plumage of another bird in my collection, which was shot in Torbay in the winter, is as follows:—The head and ear-tufts are dusky; the lore dusky; over this and over the eye to the face, the face and frill white, except the tips of the frill, which are clouded with pale dusky; all the rest of the plumage much the same as in the other bird, except the flanks and thighs, which are mixed dusky and white, without any of the bay. I always considered this the winter plumage, as all the birds I had seen about the south coast of Devon, either alive or recently killed, were in the same plumage: Yarrell, however, does not make any distinction between summer and winter plumage; and Meyer describes a bird of two years old as very much like this last-named bird of mine; so it may be a second-year bird, but it is certainly odd that so great

a proportion of those about the South Devon coast in the winter should be in this plumage. Younger birds in their first winter have little or no ear-tufts or frill. The chicks after they are first hatched "have their bills mottled black and white; the head and neck ornamented with long dark stripes on a ground colour of dull greyish white; the upper surface of the body is dark brown, with longitudinal stripes of light brown; the whole of the under surface is white."*

According to Meyer's coloured plate, the egg is of a very pale greenish white.

SCLAVONIAN GREBE, *Podiceps cornutus*. There are but few instances, I believe, of this bird having occurred in this county. There is one stuffed specimen in the late Mr. Esdaile's small collection, which that gentleman told me he had shot in his pond at Cotheleston some years ago during some hard weather in the winter. I also saw one in the Museum at Taunton, in the flesh, which had been placed in Mr. Bidgood's hands for preservation: it had been killed in the marsh in the middle of February, 1865. These are the only two specimens of which I have a personal knowledge: they were both in winter plumage—the "Dusky Grebe" of Bewick.

This bird frequents both the sea and inland

* Yarrell, vol. iii., p. 409.

waters. On the south coast of Devon I have frequently seen it in the winter: it has also been taken in the neighbouring county of Wilts, as far inland as Salisbury, as there are several notices in the 'Zoologist' of its capture in the river near that place.

Whether this bird remains to breed in any part of Britain seems doubtful: it may, however, occasionally do so, as it has been seen in perfect summer plumage as late as the end of May.* The nest is said to be placed amongst grass and rushes, not attached to them, but floating on the water: it is made of reeds and other aquatic plants.

This bird appears to feed upon fish, beetles, roots and other vegetable matter. As in that of the Great Crested Grebe, feathers are constantly found in the stomach of the present species.

In full summer plumage this is a very handsome bird: it is considerably smaller than the last-mentioned species, not exceeding a Common Guillemot in size. The bill is black, white horn at the tip. Yarrell says the irides are vermilion-red, and one note in the 'Zoologist' agrees with this description,† but two other notes of recently-killed specimens differ, one describing the iris as of two different colours—the inner rim white, the outer crimson,

* Yarrell, vol. iii., p. 417.

† 'Zoologist' for 1864, p. 9048.

tinged with vermilion,*—and the other note describing the inner rim as yellow, and the rest carmine-pink.† “From the base of the upper mandible to the eye, and from thence for the space of an inch behind the eye, the feathers are of a rich yellowish chesnut, the latter elongated, forming a tuft; from the chin, the feathers on the throat, cheeks and sides of the neck are also elongated, forming a ruff of rich dark brown; back of the neck and all the upper surface of the body dark brown; the secondaries of the wings alone white, but scarcely seen unless the wings are extended; neck in front rich reddish chesnut, becoming rather darker towards the bottom; breast and belly shining silvery white; sides under the wings dusky, mixed with some chesnut streaks; legs and toes dark greenish brown outside, varied with yellowish green on the edges and inner surface.” This is Yarrell’s description of the adult bird in summer plumage. A bird in my own collection, shot in Torbay in the winter, has the top of the head and ear-tufts (which are short) dusky; the back and all the upper parts dusky; secondary quills white; lower part of the face and sides of the neck and all the under parts white; flanks and thighs dusky and white mixed: in this plumage, which is the one in which this bird is most

* ‘Zoologist’ for 1865, p. 9435,

† Id., p. 9565.

frequently met with in these parts, it is the "Dusky Grebe" of Bewick.

The eggs when fresh laid are said to be of a bluish white.*

LITTLE GREBE or DABCHICK, *Podiceps minor*. The little Dabchick is a much more common bird in our county than either of the Grebes before mentioned: it remains with us all the year, and may be found in most of our ponds and pools and in many of the rhines in the marsh. In my pond I have only seen it once, and that was in September, 1865: it had been a very dry summer, and water was running unusually scarce throughout the county, so I suppose his native pool had been dried up and the poor little Dabchick driven to seek food and water somewhere else: it seemed very tame and quite at home during its stay, which was not long: the Moorhens, I think, drove it away—at least they seldom left it long at peace.

Yarrell says of this bird that its powers of flight appear to be limited; but it must occasionally make tolerably long flights; for instance, the one that came to my pond must have flown at least a mile, as there is no place within that distance from which it could possibly have come: it could not have made its way by water, and no Grebe would ever dream of walking a mile under any

* Yarrell, vol. iii., p. 416.

circumstances ; but besides this one, many others of these birds must have been driven that summer to seek for fresh quarters, for to remain where they were was to starve, as a great many even of the larger pools were dried up. Very hard frosts also must drive many of these birds to make expeditions in search of food and water when their usual haunts are frozen and snowed up, and a great many of them must suffer severely at such times.

This bird appears to be capable of being tamed and kept in confinement, and of its habits in this state there is the following interesting note in the 'Zoologist' for 1864 :—"I had a very large glass globe with small living fish in it, and into this the bird was able to go when inclined to feed. It was so tame that in my presence it would dive after the fish, bring them up and swallow its capture whole. It was very fond of fresh meat, which it took from my hand. When resting it does not place its feet upon the ground, but turns them up so as to place them under its wings, which it covers with its side feathers, and thus entirely hides them from view : it will also rest in the same manner upon the water. The Grebes are generally figured as sitting erect, and I was anxious to see if this bird did so, but I could not discover that such was the case : it always sat with its face to the ground, but when walking or running its posture was nearly erect, and it proceeded along with a waddling gait."

In a wild state the food of the Little Grebe consists of small fish, aquatic insects, and some vegetable substances. The one that migrated into my pond was constantly jumping from the water to pick insects from overhanging branches of laurel and other shrubs. As is usual with the rest of the Grebes, feathers are constantly found in the stomach of the present species.

The nest is a tolerably large structure of aquatic plants, placed in the water amongst reeds, rushes and coarse herbage.

The adult bird in summer has the "bill black, the tip of white horn; irides reddish brown; the head, back of the neck and all the upper surface of the body very dark brown, almost black; the secondary quills white; the chin black; cheeks, sides and front of the upper part of the neck reddish chesnut; under surface of the body dull greyish white, the sides under the wings and the flanks dusky brown; legs and toes dark greenish brown."* One in my collection in winter plumage has the head, back of the neck, back and scapulars very dark olive-brown, with a dark streak on the shaft of each feather; wing-coverts dark dusky; quills a shade lighter, those nearest to the secondaries inclining to white; the sides of the face, ear-coverts and neck pale rusty brown; chin white; breast clouded; belly white;

* Yarrell, vol. iii., p. 426.

flanks and under tail-coverts dusky, muddled with white. Another of my specimens is much paler all over, and has little or no olive mixed with the brown: this is a much younger bird—probably a bird of the year.

Yarrell says the eggs when first laid are perfectly white, but soon become stained with greenish yellow and brown from being in contact with decaying vegetable matter and soil from the feet of the bird: two in my collection are yellowish brown, and do not look as if they had ever been quite white.

GREAT NORTHERN DIVER, *Colymbus glacialis*. The Great Northern Diver is by no means a common visitor to this county, either to the shores or the inland waters: on the shore, indeed, I have never seen or heard of a specimen, but one or two immature birds have occurred in the inland ponds at Chargot; some of these were preserved, and are, I believe, still at Sandhill Park: one specimen, a mature bird changing to winter plumage, was shot on the river at Ninehead, and is still in the collection of Mr. Sanford. As far as the coast line is concerned, all the Divers probably stop short with the muddy water, which generally reaches a little below Minehead; so they may occasionally come up as far as Porlock Bay, as I know they are not uncommon in immature plumage a little lower down the coast at Ilfracombe. The bird has also made its appearance on a pond in the neighbouring, but still more inland,

county of Wilts. My own acquaintance with this species has generally been cultivated on the south coast of Devon, where it is common during the winter, an occasional specimen remaining on till quite late in the spring, as I have received a bird from there, in full plumage, as late as the 30th of May, and I unsuccessfully chased another full-plumaged bird at Exmouth as late as the 14th of May. On this coast, indeed, I consider both the Great Northern and the Redthroated Divers very common from about October to May, for in the course of a row for a mile or so, or a walk along the sea-wall at Teignmouth, one is sure to see several of them; but, except the two just mentioned, I have never seen a full-plumaged Northern Diver on that coast, though I have received specimens, both from that and the north coast of Devon, in apparent change to winter plumage; but on this subject I shall have to say more when I come to the descriptions of the bird in its various stages.

This is a very difficult bird to approach or to shoot, especially as soon as he finds himself chased: the best chance of getting a first shot is to watch the bird feeding, and gradually to creep up closer and closer, rowing hard whilst he is employed below, and keeping quite still as soon as he comes to the surface: by this means one may get tolerably close before the bird begins to suspect danger; but if he is not killed then at the first shot a long chase may

be expected, as he can swim under the water quite as quickly as one can row an ordinary sea-boat, and his first dive will perhaps take him two or three hundred yards off, and it is no use then waiting for another dive to get closer while he is below—one must keep hard at it and follow him up. Now and then a bird will turn and dive back towards the boat, and perhaps, just as one is giving it up altogether, up he will come close to the boat, giving a fine chance of throwing away a shot, for he is no sooner up than, seeing the boat close to him, down he goes again; but when a bird takes to dodging like this he gives a better chance than when he goes straight away over the open right a-head: a stern chase is proverbially a long one, and this is no exception to the rule. Perhaps a boat under sail in a good breeze gives a better chance than rowing in a calm, as the boat moves quicker, and one has not got to be always looking over one's shoulder for the bird; but then the difficulty both of seeing and shooting are increased by the ripple of the water and the motion of the boat, and great care must be taken to keep to windward of him, for if he is once allowed to get to windward it is all over—he will swim and dive as fast again as one can beat under sail or row to windward. On the whole, either sailing or rowing, a chase of a Northern Diver is sure to afford a considerable amount of excitement and sport—nearly, if not quite, equal to a fox hunt, and beating any

amount of slaughter of tame Pheasants just arrived by rail from Mr. Castang's. If any of the tailors and cockneys the Rev. F. O. Morris writes so pathetically about, in the 'Times,' as destroying the poor Gulls and Guillemots at their breeding stations about Flamborough, would try their hands instead at a good Northern Diver chase, rowing or sailing their own boat, they would get plenty of sea air and exercise, and might consume as much beer and expend as much ammunition as if they had shot two or three hundred poor birds either sitting on their eggs or seeking food for their young, who, consequent upon the death of the parent birds, are left to starve on their nests; and besides, there would be more enjoyment in an occasional success, as there would certainly be some skill and perseverance shown in the chase.

The food of the Northern Diver consists almost entirely of fish, such as herrings, mackerel, sprats, sand-eels, and occasionally prawns and shrimps.

The Great Northern Diver does not appear to breed in any part of England; but I believe it does so occasionally in the extreme North of Scotland and in the Scotch Islands: at this time it appears to frequent inland waters and lakes. The nest, which is flat and made of dead herbage, is placed near the water, amongst reeds and flags. The nesting time appears to be the only period in which this bird ever willingly goes on shore, for, as may be at once seen

from the position of its legs and feet, it is not a great pedestrian, and, although a good flyer when once on the wing, it cannot rise from the land : when on that element it appears to progress more like a seal than a bird, jumping along on its hind legs and wings.

In a note on the habits of this bird, in the 'Zooologist,' Mr. Blake-Knox says he has never been able to keep one tame, as it always wears its feet off by endeavouring to swim on dry land : he adds that it always appears to remain fierce and implacable, flying at any one who approaches it, and a wound from a Northern Diver's beak is no joke. Montagu, on the other hand, mentions one which was kept tame in a pond for a considerable time, and says that it became so tame in a few days that it would come from one side of the pond to the other at the call, to take food from the hand, the food being fish, or, when that failed, raw meat.* Another, mentioned by Yarrell as having been kept partially tame, does not appear in the least to have possessed the amiable temper of Montagu's bird, but would defend himself in great anger by darting at the intruder and striking powerfully with its beak : this bird appears occasionally to have come ashore out of his pond to hide and bask in the grass on the edge.

On the very few occasions on which this bird

* Montagu's Dictionary, by Newman.

does come on land it does not appear to assume the upright positions in which we are so accustomed to see it stuffed or drawn—a position which is so common with Shags, Cormorants, Guillemots, &c.

There seems still to be some doubt and perplexity about the various changes of plumage both in this bird and the Redthroated Diver, next to be mentioned; the question being whether, once having assumed its full plumage, it remains in that state for the rest of its life or changes periodically summer and winter. I think the better opinion seems to be that it changes, and I do not think any one has yet answered in the affirmative Mr. Blake-Knox's question, "Has anyone seen or taken a summer-plumaged bird in the winter?" The nearest I can come to an affirmative answer is the one presently to be described, which was killed at Exmouth on the 9th of December, but both this and Mr. Sanford's bird, and one recently sent me from Barnstaple (also about to be described), may be changing to winter plumage.

The full-plumaged bird is certainly a splendid fellow, and very different from the generality of specimens one sees. The beak is black; the irides red; head and neck all round black, beautifully glossed with green; just under the chin, across the fore part of the throat, is a long narrow patch, streaked black and white, and lower down each side of the neck is a broad triangular patch of the same;

the back is black, regularly spotted with white; the scapulars the same, but the spots much larger; wing-coverts the same, but the white spots smaller than on the back; rump and tail-coverts black, with very small white spots, more on the tail-coverts than on the rump; the tail-feathers are very short, black, with a few small white spots towards the tip; the quills are black; the sides of the breast immediately beneath the black part of the neck and towards the point of the wing are distinctly streaked with black and white, like the patches on the neck; just at the point of the wing in the flank the streaks cease and the feathers are black, with small white spots; breast and all the under parts pure white; back of the thighs to the tail-coverts black, with small white spots; the legs, toes and webs are very dark, nearly black, on the outside. This is the description of the bird previously mentioned as having been killed at Exmouth on the 30th of May (*ante*, p. 535), and which was sent to me in the flesh and is now in my collection: as before stated, I have never seen a bird in this plumage in the winter, though I saw and chased one in equally good plumage a fortnight earlier in the month—on the 14th of May. The bird I am now about to describe is one of the nearest I have ever seen to full plumage in the winter: it was killed at Exmouth on the 9th of December, and sent to me in the flesh the next day: it is in a state of change, and is either a young bird just assuming

full adult plumage or a mature bird changing summer for winter plumage : though this would generally be about the end of the moulting season, this bird does not appear to be changing its feathers by moult, but only the colours of the feathers themselves : the bill is black, mixed with a little flesh-colour (now white) towards the base ; the top of the head and back of the neck are black ; the lower part of the face to the eyes, the chin and throat white ; the black encroaches on the white towards the bottom of the throat, nearly joining in front at that place ; the back and scapulars are in an evident state of change, some of the feathers being quite as black, and the white spots on them quite as pure and distinct, as in the bird last described—the rest of the feathers black towards the base, margined with dullish grey, the places where the white spots either have been or will be is distinctly marked, and is much the same colour as the margin ; the rump, tail-coverts, tail and back of the thighs are not so much in a state of change, being black, with small white spots, like those parts of the last-mentioned bird ; a few of the black and white streaks appear in places on the sides of the breast, the rest of that part being mottled dusky and white, mostly white ; the under parts white. This appears to me rather an interesting specimen, as showing the peculiar change of plumage, and also from the time of year it was taking place. A specimen recently sent from Barnstaple, killed on the

19th of December, had the head and neck in more perfect summer plumage: the head was greenish dusky; the chin was white; the throat and sides of the face to the eye were white, much mixed and streaked with black; one of the black and white patches on the throat was perfectly visible, but was gradually assuming the mottled appearance of the rest of the neck; the rest of the plumage as in the last-mentioned bird. Mr. Sanford's bird, shot at Ninehead in the winter (he could not give me the exact date), is in the same state of plumage. Another specimen, killed at Teignmouth in the winter, is in the plumage in which these birds almost invariably occur on that coast: there is more of the pale colour about the bill; the top of the head and back of the neck are dark dusky; the chin and throat white, mixed on the lower part of the throat with dusky; all the upper parts have the feathers very dark dusky, almost black, broadly margined with pale grey; the margins on the wing-coverts are much narrower; all the under parts are white; the legs, toes and webs are paler than in the other specimens. The legs are very strong, flat and sharp, presenting but little surface against the water, but very broad sideways: there is much difference between the outside and the inside of the leg, the outside being always much darker, presenting much the same difference as between the upper and under parts of a flat-fish.

According to Meyer's plate, the eggs are olive-brown, thinly speckled with much darker brown.

REDTHROATED DIVER, *Colymbus septentrionalis*. I am afraid I cannot record more than one specimen of the Redthroated Diver as having occurred in Somersetshire, and that a dead one: it was picked up quite fresh close by a small pond at Bishop's Hull, near Taunton, on the 29th of March, 1868, and brought to Mr. Bidgood, the curator of the Museum, who stuffed it, and has it now in his own collection: it must have been passing over the land from one channel to the other, either to avoid bad weather and a lee-shore or else on the commencement of its migratory journey, and probably from weariness pitched on the land, from which it was unable to rise again; nor could it in all probability make its way on foot to the small pond it was near, which might have given it a chance of recovery, and perhaps a feed of fish, if it could have reached it.

This bird is much more common on both coasts of Devon, where it is called the "Lune," "Loon" or "Sprat Loon," and sometimes the "Speckled Diver." It appears rather odd that neither this bird nor the Great Northern Diver frequent our part of the Bristol Channel, as they are not uncommon on the north coast of Devon and on the other side off Swansea—probably they stop short at the muddy water; certainly it would occasionally rather puzzle them to see their prey in some parts of our channel,

and diving in that thick muddy water must be something like walking in a London fog.

The food of the Redthroated Diver consists of fish, on which it feeds rather greedily, as many as sixteen small fish having been seen to fall from the throat of one of these birds, as recorded in the 'Zoologist' for 1864. Mr. Blake-Knox gives rather a curious account of their diving for dabs: these fish generally hiding in the sand on the approach of danger, the Diver turns on his back and ploughs up the sand with his upper mandible to get them: this operation Mr. Knox says he has watched when fishing in clear water, and seen the dabs taken off his own line by the bird.

The Redthroated Diver appears to breed in the northern part of Scotland and in the Scotch Islands: it is said to make little or no nest, but places its eggs amongst the stones close to the water—so close sometimes that the bird can reach the water with its bill.

As a subject of the chase this bird almost equals the Northern Diver, but I do not think it quite so difficult to obtain: I think, too, it is rather fonder of flying, which it does well and at a great pace: it occasionally flies by one's boat, and gives a good chance of a shot in that way.

Various papers in the 'Zoologist' have, I think, nearly proved that the full plumage of this bird, with its red throat, is only a summer plumage, which it

loses again about October or November: it appears to be rather earlier in attaining its full summer plumage, if such it is, than the Northern Diver, for a bird in perfect full plumage in my collection was shot at Exmouth as early in the year as the 28th of March. The bill is bluish horn; the irides red; the top of the head and back of the neck streaked longitudinally with black and white; the face, sides of the neck and chin a beautiful pale slate-grey; fore part of the throat red; back and scapulars very dark dusky, nearly black, with a very few small white spots; rump and tail-coverts the same, but the white spots are smaller and rather more frequent; wing-coverts the same, but instead of the spots each feather is edged all round except the tip with white; the primary quills are dark dusky; flanks and thighs dusky, tipped with white; all the under parts are pure white; the legs, toes and webs dark brown—like those of the Northern Diver, they are paler inside, where they are not exposed to the light. Another bird in my collection, also shot at Exmouth, but in the winter, and to all appearance an adult bird, has the top of the head and back of the neck like the first mentioned; the back and rest of the upper parts very dark, nearly black, very distinctly speckled with white—the white spots are larger and much more numerous than in the other bird; there are a few dark marks in the middle of the throat; with this exception the chin, throat and all the rest

of the under parts are pure white; the back of the thighs to the tail-coverts very dark dusky, speckled with white. Another specimen, likewise shot at Exmouth in October, and certainly a young bird of the year, has the throat and sides of the neck much clouded and mixed with dusky; the top of the head and back of the neck dusky grey, mixed with white; the back and scapulars are much the same ground colour as the last, perhaps rather paler, but the white spots are very different in shape, being much longer and not so round—in fact, the top of the feathers are nearly margined with white, there being only a little break in the centre at the tip; the rest of the plumage is much as in the last. In these two last states of plumage it is the first and second “Speckled Diver” of Bewick.

The eggs are reddish brown, spotted with much darker brown.

This is the last of the Grebes and Divers I can include in this list. I do not think they can be considered either of much use or harm in their relation to man: perhaps an occasional unsuccessful fisherman may growl at a “Sprat Loon,” as he would call it, for driving the fish away from the coast, but that is merely an outburst of ill temper; no doubt they eat a few fish, but not enough seriously to diminish their number.

Family ALCADÆ.

Of the Alcadæ or Auks I can include five out of the eight species usually considered as British: they are all rather accidental stragglers to our shores; one of them, the Little Auk, very much so, only making an occasional appearance in very bad weather; the other three species breed in considerable numbers at Lundy Island and other places at the mouth of the Bristol Channel, from whence they wander as far up channel as Porlock Bay and Minehead, off both which places I have seen them when I have been on a summer cruise.

COMMON GUILLEMOT, *Uria troile*. The Common Guillemot is very common and resident throughout nearly the whole of the English coast, collecting at the various breeding stations in the summer, and spreading about in various parts of the sea in search of food as soon as the young are sufficiently advanced to take care of themselves. When collected at the breeding stations they may be seen in thousands, some on the water engaged in fishing, and others standing in long rows on the rocks, lining every available ridge like detachments of skirmishers. The nearest large breeding stations to us are at Lundy Island and on the south coast of Wales, particularly about Tenby, at both of which places Puffins, Guillemots and Razorbills collect in

immense numbers, and about Tenby, I am sorry to say, they are most ruthlessly shot down by sporting tourists. I have seen whole boat-loads brought home from Caldy Island to Tenby and thrown away on the beach, to say nothing of dead and wounded left about on the sea: when we consider that this was in the middle of the breeding season and very many of the birds thus shot were employed in feeding their young, who must have been left to starve on the cliffs, it does seem almost a pity that we have not an Act of Parliament to protect these and all our other sea-birds for the short time of their breeding season—say June to August.*

The eggs of the Guillemot are placed on the bare ledges of the rocks, without any nest, and often in very exposed situations, where it seems wonderful they are not blown off by the wind, but probably their pear-shape protects them from this, as they only run round when moved by the wind. Whether these birds have any predilection for their own eggs I cannot say, but I should think not, as it must be very difficult for them to identify their own amongst the numbers lying about on the rock, in spite of the extraordinary difference of colour in the eggs themselves. The parents are said to carry their young down to the water on their backs, but I have never

* Such an Act of Parliament, but giving a longer time, has now been passed.

seen this done, though I have seen young birds in the water that certainly could not have flown down, and a fall from the height at which the eggs are usually placed would be fatal to the young birds, even if they fell into the water, but in many instances they would fall on the hard rocks or stony beach.

After the breeding season the Guillemots spread themselves all over our seas in search of fish, on which they live almost entirely. On the south coast of Devon, when the sprats and herrings are about, both Guillemots and Razorbills collect in considerable numbers; indeed a shoal of herrings or sprats collects immense multitudes of birds, various sorts of Gulls, Gannets, Divers, Cormorants and others, as well as the present species, making a most lively and animated scene, which I have often watched with the greatest interest, many of the birds being so bold that they will come nearly within arm's length of the boat; some of the more wary ones, however, creeping off as the boat approaches. The chase of a Guillemot is by no means such an arduous undertaking as that of a Northern or Redthroated Diver, for although a quick and easy diver it does not disappear under water in the same wonderful manner, nor does it dive so far. On the wing it goes at a great pace, but pretty straight, so the only difficulty in shooting it is to shoot far enough a-head.

The bill of the Guillemot is sharp and pointed, of a dark colour, nearly black; irides very dark brown;

the top of the head, back of the neck, and all the rest of the upper parts, very dark lead-grey, almost black, the tips of the secondaries white; the front of the neck is dark sooty brown, almost black in summer; the breast and all the under parts white; the legs, toes and webs very dark brownish black. In winter the chin, the lower part of the face under the eye, an irregular patch at the back of the eye, and the throat, are white: in this plumage it is the "Lesser Guillemot" of Bewick.

The eggs, which are very large for the size of the bird, are pear-shaped, and differ immensely in colour; some in my collection have the eggground white, but one is scrawled all over with pale orange-brown lines; others are spotted with black or dark brown; others again have a green ground and are spotted with black or dark brown: in fact, the variety seems almost endless.

BLACK GUILLEMOT, *Uria grylle*. One specimen of this bird, which is rare in all our southern counties, has been taken off St. Audries, near Quantoch's Head, and is now in Mr. Sanford's collection at Ninehead Court: it is a mature bird in winter plumage, but Mr. Sanford could not give me the exact date of its capture, though, from the plumage of the bird,—white, with only a few black feathers on the back,—it must have been taken during the winter months. Montagu says a few Black Guillemots breed on the south coast of Wales near Tenby, and this may have

been a straggler from this breeding station. Yarrell says it breeds in some of the more northern counties of England, and in Scotland and the Scotch Islands. Dr. Saxby, in the 'Zoologist' for 1864 (p. 9316), says that in Shetland these birds breed in crevices of the cliffs, amongst rocks on the beach, and sometimes beneath large stones upon a grassy island.

The food of the Black Guillemot consists principally of small Crustacea, marine insects and worms, and but rarely of small fish.*

The adult bird in summer has the beak black; irides brown; the whole of the plumage black, except a patch on the wings, which is white; legs, toes and webs vermilion-red. During the winter the greater part of this plumage changes to white. The young birds of the year have the feathers of the head and back edged with white, and the white wing-coverts edged with dusky and ash-colour; the sides of the head, neck and breast are edged with ash-colour.†

Yarrell says the egg is white, slightly tinged with green, blotched, spotted and speckled with ash-grey, reddish brown and very dark brown; but the eggs appear to vary in colour, though not so much as those of the Common Guillemot, nor do they resemble them in shape.

* Meyer's 'British Birds,' vol. vii., p. 40.

† Id., p. 42.

LITTLE AUK, *Mergulus melanoleucos*. The Little Auk is only an accidental rough-weather visitor to our county, and even then an unwilling one, only coming when storm-driven. The only two specimens I know of as having occurred were in November, 1863, on the 3rd of which month Mr. Haddon had a Little Auk brought to him alive: it had been caught in some faggots on the top of a wood-rick at Kingston, near Taunton, and is now in Mr. Haddon's collection: on the day following Mr. Welman, when out shooting with me at Burnham, picked up a Little Auk dead on the mud, where it must have been left by the receding tide; it was quite fresh and apparently only just dead: this bird is now in Mr. Welman's collection: it was very rough, blowing weather at the time, and the wind mostly west. Both captures were recorded by me in the 'Zooologist' for 1864. Montagu mentions another specimen having been picked up dead near Bridgwater: this was also in the month of November.

Generally this "plump, round-shaped bird," as Bewick calls it, is a dweller in extreme northern latitudes, and although occasionally making its appearance on various parts of our coast, and sometimes even inland, it does not appear to be a regular visitor to any part of England.

Meyer says that these birds collect in considerable numbers at their breeding stations, and each lays its single egg deep in a crevice amongst the loose stones,

or in a natural cavity to which there is but one entrance: where space allows it several birds congregate in the same cavity.

The food appears to be entirely fish, and Yarrell adds thin-skinned Crustacea.

This is a little bird, considerably smaller than the Puffin. The bill is black; irides hazel; there is a small white spot over the eye; the head, hind part of the neck, back, wings and tail are black, but the ends of the secondaries and sides of the tertials are margined with white, which makes several white streaks on each side of the back; the colour on the chin, throat and neck in front, depends on the season, being black in summer, white in winter, and mottled in spring and autumn—that is to say, while the change of plumage is going on; the under surface of the body is white; the legs and toes yellowish brown; the webs darker brown.

The eggs are said to be of a uniform pale blue, not unlike those of the Starling in colour. Meyer's picture seems much too large, considerably exceeding the measurements given by Yarrell.

PUFFIN, *Fratercula arctica*. This curious-looking little bird occasionally straggles up the Bristol Channel from Lundy as far as our coast. Yarrell considers it a summer visitor to the English coast, but I have seen one or two specimens off Exmouth in the winter. Montagu also mentions their occasional appearance on that coast during the winter: some of

the sailors about Tenby also told me that they sometimes saw considerable flocks of Puffins during the winter, not far from their old haunt near the mouth of the Bristol Channel, especially in foggy weather; so that it would seem they do not retire very far during the winter.

Where they have the opportunity these birds generally lay their eggs either in holes excavated by themselves or else make use of a rabbit-burrow; but in the absence of soft ground to burrow in or rabbit-holes, they will place their eggs in the natural crevices of the rocks: in either case their eggs are not easily got at, as they generally place them as deep in their holes as they can: it is no joke putting one's hand into these holes, at least without a good thick ferret-glove, and if Mrs. Puffin is at home she will most likely give rather a severe bite even through that. But little nest appears to be made, only a few dry reeds or bents being collected at the bottom of the hole. At this time they appear very tame, scarcely caring to get out of the way of a boat, or even of the paddle-wheels of a steamer: in some places where they are numerous, as at Tenby, they suffer severely for this tameness, especially if they are pretty thick, as several may be killed and wounded at a shot. At Lundy I have seen them run out of their rabbit-holes close by one, and appear very much inclined to have a bite at one's toes: at such times they would seem to be very

impudent little fellows, quite equal in that way to a tame Jackdaw. I do not know whether they have ever been kept tame, but if they can be I should think they would prove most amusing.

The Puffin feeds principally on fish, and I have often watched them busily engaged flying to and fro their nests at the top of some high cliffs to the water, carrying a small fish or two on each return journey for their young. To fish, Yarrell adds as part of their food, marine insects and small Crustacea.

The Puffin is certainly the oddest-looking little fellow imaginable, with his big flat bill, which is very narrow on the ridge and very broad sideways: a rib at the base of the upper mandible and the soft part of the gape are yellow, then a large spot of bluish grey, the rest being much grooved and of an orange colour; the irides are pale grey; the eyelid orange; the top of the head, all the upper parts and a collar round the upper part of the breast are black; the whole of the face and chin white; the breast and all the under parts white also (in one of my specimens, probably a younger bird, the face is smoky white); the legs, toes and webs light orange. In a young bird of the year in my collection the bill is by no means so broad sideways, nor is the ridge so sharp; it is black, inclining to dullish grey at the base; a tolerably large space from the bill to the eye and round the eye is nearly black; the rest of the

face and chin very smoky white; the upper parts and the collar round the neck are black, and all the under parts white; the legs, toes and webs are a sort of dusky brown: it is smaller than the adult, and might almost be mistaken for the Little Auk at the first glance, except for the white marks on the scapulars and tertials.

The egg is of dull white, with a few indistinct bluish drab spots.

RAZORBILL, *Alca torda*. This is another of the occasional stragglers from the Lundy and South Wales breeding stations. It is a larger bird than the Puffin, quite equalling, if not exceeding, in size the Guillemot, which bird it very much resembles in its habits, collecting in great numbers at the same breeding stations: they seem, however, to be a little more particular in the choice of a place in which to lay their eggs, generally choosing niches and crannies in the rocks to lay them in, rather than the mere ledge of rock, often only just wide enough for the egg: the cause of this greater care probably is that the eggs, not being so pear-shaped, would roll off if placed in the same situation.

As with the rest of the family, the food of the Razorbill, both old and young, is fish and a few Crustacea.

There seems at one time to have been considerable doubt concerning the different plumages of this bird, Colonel Montagu considering the young bird to

be a distinct species, to which he gave the name of the "Blackbilled Auk." Bewick also mentions the "Blackbilled Auk" as distinct, but winds up his account of it with the following quotation from Latham:—"This from its external marks should appear to be a different species from the Razorbill, but we are pretty certain it is no other than the young of that bird."

In the adult bird the bill is narrow at the ridges and flat at the sides, not so broad as that of the Puffin, but rather longer in proportion to the breadth. There is a distinct white streak across the bill; irides dark brown; there are two narrow streaks of white from the top of the upper mandible, one to each eye; the head, the back of the neck, and all the upper parts black; the tips of the secondary quills are white, making a white bar on the wing; the chin and front of the neck in summer are very dark sooty brown; the breast and under parts are white; legs, toes and webs black. In winter the sides of the face, chin and fore part of the neck are white, and there is no white line from the upper mandible to the eye. One specimen in my collection, shot by me off Exmouth on the 10th of April, wants the white lines from the bill to the eyes, but otherwise the summer plumage is beginning to return, the white on the fore part of the neck being much mixed with brown. A young bird of the year, also shot by me at Exmouth, on the 22nd of November, has the bill much smaller,

and there is no white mark across it; the streaks from the upper mandible to the eyes are just marked, but by no means so distinctly as in the adult; the chin, throat, sides of the neck, and an irregular patch at the back of the eye, are white; the rest as in the adult.

The eggs are not nearly so pear-shaped as those of the Guillemot—not unlike a Hen's egg in size and shape; white, much blotched and spotted with very dark brown, almost black, and reddish brown.

This is the last of the family that I can include in this list. There is not much to be said of them, either individually or collectively, as regards their usefulness to man; but they certainly add much to his pleasure when seen at their various breeding stations, for which purpose they seem to me to pick out the most beautiful spots,—at least, all the stations I know of are such,—Lundy, Caldy, the Stack Rocks and Alderney (at which latter place the numbers, especially of Puffins, are almost incredible), and greatly do these birds add to the beauty of such spots and enliven the scene, constantly flying backwards and forwards from the rocks to the water, the black and white of the Razorbills and Guillemots beautifully conspicuous against the dark rocks and the bright blue sea, and the orange bills and legs of the little Puffins shining brightly in the summer sun. I cannot say that the Razorbills and

Guillemots add much to the general beauty by their voices, as they groan and grunt at each other in a horrible way, like twice their number of pigs.

Family PELICANIDÆ.

Of the four Pelicanidæ now included amongst the British birds, I have only two Somersetshire species to mention, both of them only occasional visitors to our muddy sea.

COMMON CORMORANT, *Phalacrocorax Carbo*. I only know of one Somersetshire specimen of the Cormorant, and that is the one mentioned by Montagu as having been taken alive in the river near Bridgwater, and sent to him by his friend Mr. Anstice: this bird lived some time in confinement—quite long enough to show its various changes of plumage, and to prove that the Cormorant and the “Crested Cormorant” of Bewick are the same bird, the only difference being that the latter is the present species in its summer plumage.

This bird appears to become very tame in confinement, as both Montagu's bird and one kept by Dr. Saxby* became almost troublesomely tame, roaming about the house wherever there was an open door, and occasionally making an expedition to inspect the

* See ‘Zoologist’ for 1865, p. 9403.

larder. Dr. Saxby's bird seems to have been the more omnivorous of the two, eating birds, fish, mice, raw meat, or almost anything that he could come across. Montagu, on the other hand, seems to have found some difficulty in keeping his bird alive when fish were scarce, and had at first to cram him with raw meat. Both of these birds seem to have been very fond of basking by the kitchen fire; but Dr. Saxby says it was at such times dangerous to leave either fish or flesh within reach of his bird, as once he carried off a newly-skinned rabbit. In a wild state the food of the Cormorant appears to consist almost entirely of fish.

These birds collect in some considerable numbers at their breeding stations. The nests are generally made high up on the cliffs and sometimes on trees, especially fir trees. Yarrell, in a note, mentions as many as eighty Cormorants' nests being collected together in some high Scotch fir trees, at a place called Castle Martyr, in Scotland. The nest is generally made of sea-weed and long coarse grass.

The Cormorant is not very easily approached in a boat on the open sea, nor when perched on a rock, unless some cover can be found, as he is generally pretty wide awake and much more ready to save himself by flight than the Northern Diver. Except after a wounded bird I have never had such a chase as for a Northern Diver: I have, however, occasionally stalked up tolerably close to one when

fishing, by the same dodge of rowing up hard while the bird was under water and remaining quiet as soon as he appeared on the surface; but as soon as the boat was up near enough for him to suspect danger he would be off on the wing, and not under water. Perhaps the easiest way of shooting a Cormorant is to wait for him when he comes in to roost; but though I have occasionally tried this plan, when in want of a specimen, with a certain amount of success, on the cliffs at Berry Head, near Torquay, I do not much like it, as the birds do not come in to roost until it is getting dark, and consequently there is considerable difficulty in following up a wounded one if it falls into the water, and in any sort of shooting I hate losing a wounded bird. Without any shooting, however, it is a very interesting sight to watch the Cormorants coming in to roost: at Berry Head the roosting place is in an extremely beautiful situation, in a tolerably large cavern at the bottom of a little bay immediately under the highest part of the cliff: into this cavern the sea runs for some distance, and for the purpose of watching the Cormorants one must land on the rocks in the cavern, and pick out a convenient hiding-place, while the boat is rowed off to some distance behind a small island just at the entrance of the bay. As it is getting dusk the Cormorants begin to come in from the sea, very sparingly at first,—one at a time,—and after a short flight of inspection round the

bay, in comes the first arrival, looking dark and gloomy in the dull light, as he flies up the cavern and pitches on some rock, where he remains, at first twisting his long neck in every direction and peering about to see that there is no danger: if he thinks there is, away he goes and flies about the bay, and sometimes a considerable way out to sea, till he thinks it is all safe: while he is away perhaps two or three others come in, all taking the same precautions, and going off again if there seems to be any danger. As it grows darker the arrivals increase, and some of the frightened ones come back: they appear then to come in more resolutely, and not take so many precautions against danger, soon coming back, even if a shot is fired at them.

The Cormorant is a fine large bird, quite as large as a good-sized tame Goose, but the body differs in shape, being longer in proportion to the breadth, and the legs are put on much further back—more like those of the Colymbidæ. The adult bird in summer plumage, from which the following description is taken, was shot at Exmouth on the 10th of April: there were others about at the same time, some quite as much in summer plumage, and others with little or no appearance of it, and no “white shirt” hanging out on the thighs:—the bill is pale brown, the point horny, and the upper mandible much hooked over the lower; the irides bright but darkish green; the top of the head, the neck all round, the

breast and all the under parts, very dark green, almost black; on the top of the head and higher part of the neck and throat are a great many long white feathers, giving those parts a very hoary appearance; some of the dark feathers also at the back of the head and neck are much elongated, forming a sort of crest, or perhaps, rather, a mane; the chin, and round the base of the bill as far as to beneath the eye, is white; the back, scapulars and wing-coverts glossy bronze-brown, each feather margined with dark glossy green or purple, according to the light in which it is seen; the primary quills and tail are black; the tail-feathers are very strong and stiff; the rump, tail-coverts, flanks and thighs dark green, the same as the under parts; on each thigh is a conspicuous large white spot, looking just as if it was a piece of a white shirt hanging out; the legs, toes and webs are black; the hind toe is very long, growing from the inside of the leg and completely joined to the inner toe by a membrane the same as the other toes: in this respect the Cormorant, the Shag and the Gannet differ from the rest of our swimming birds, who have only two webs—that is, the three front toes are joined by a web. In the autumn and winter plumage the white feathers on the head and neck, and the elongated dark feathers on the back of the neck forming the mane disappear, as does also the white spot on each thigh, and the white on the chin and at the base of the bill is not

so pure. A young bird of the year has the irides brown; the forehead, hind part of the neck, back, wings and tail dark brown; the chin and throat dull white, mixed with pale brown; the lower part of the neck in front darker brown, mottled with white; the under surface of the body dull white, mixed with a little brown; the sides and flanks dark brown.

The egg is small for the size of the bird, not pear-shaped, as in so many of the sea-birds, but largest in the middle and tapering at both ends; roughish chalky white outside and bluish green inside.

GANNET or SOLAN GOOSE, *Sula alba*. The noble old Gannet, to my mind the grandest of all our sea-faring birds, is in his youth an occasional visitor to our coast from the neighbouring breeding station at Lundy; but I do not know that he ever wanders up our side of the channel as far as Somersetshire in his more mature age. On the south coast of Devon Gannets are very common, and appear to remain there the greater part of the year, as I have myself seen them there at all times from September to May: they appear to be mostly old birds, but the young bird—the “Black Gannet,” as it is sometimes called—is also occasionally taken there.

I have never seen the swoop of an Eagle on its prey, but I cannot imagine it to be grander than, or so grand as, the dash of the Gannet. It is always a most enjoyable sight to watch a flock of Gannets feeding—some soaring high in the air, like Swifts,

their snowy white plumage conspicuous against a dark cloud, or sparkling in the clear blue sky, every now and then one shooting from amongst the rest down to the sea, with almost incredible rapidity, and with force enough to throw the spray as high as the mast of an ordinary fishing-boat; others just skimming over the water, and even then making a sudden dash down, as an unwary fish passes within shot. An ordinary gale of wind does not seem to trouble the Gannets much, as I have seen them on such occasions dash into the white water on Teignmouth or Exmouth Bar, when one would have thought it impossible to see anything below the surface, and they must, moreover, have been in considerable danger of being rolled over by a breaking wave on rising to the surface again. Although the Gannet in his dash down into the sea puts on steam enough to carry him to a considerable depth in the water,—for he is often some little time out of sight,—I do not believe he ever *dives*, in the ordinary sense of that word, either when in search of food or to avoid danger, even if wounded: the body appears to me too light and buoyant for that.

At Lundy, where, as I have before said, the Gannets have a small breeding station, they keep very much apart from the rest of the birds, in a small portion of the northern end of the island, and their nests appeared to be lower down and nearer the sea than those of the Gulls, Guillemots, &c. This is

not, however, always the case, for a correspondent of the 'Zoologist,' in the volume for 1868 (Second Series, p. 1366), describing the breeding station at Ailsa Craig, says they built at all parts of the cliffs, from the highest parts of the rock to close down to the sea: the nests were very large, made of coarse campion-stalks, fern-leaves, sea-weed, &c., and lined with finer grass and weed. The same correspondent also says it is a very interesting sight in the evening to watch those who had been fishing come back to their mates on their nests, who welcome them with a satisfied cackle, which changes to a choking gulp as they swallow the fish which their partners have disgorged.

The food of the Gannet appears to consist entirely of fish, and consequently the flesh must always be very fishy and unpleasant—at least I can answer for that of one that I tasted when in Scotland, where the Solan Goose is considered rather good, and even a whet to the appetite: nicely cooked it looks very good and much like an ordinary Goose, but the similarity ends there.

The adult Gannet is a beautiful bird: the bill is of a pale greyish blue, sharp and pointed at the end, and without the hook of the Cormorant; the irides are pale straw-yellow; the head and back of the neck buff; all the rest of the plumage, except the primary quills, is pure white; the primary quills are black, the outside ones very long, but decreasing in length

very rapidly towards the secondaries, which, as well as the tertials, are short, the whole wing being therefore in shape much like that of the Swift; the front of the legs and the toes are green; the back of the legs and the webs are black; the webs extend to the hind toe, as in the Cormorant, but the legs are not placed so far behind as in that bird, consequently the Gannet does not assume such an upright position when on land. The young bird of the year has the whole of the head and neck dark dusky, thickly speckled with white; the back, scapulars, rump, wing and tail-coverts are the same, but the white spots, being merely a spot of that colour on the tip of each feather, are much less frequent where the feathers are largest; the primary quills and tail are dusky; the under parts appear lighter, the greater part of each feather being white and only the margins dusky. The correspondent of the 'Zoologist' whom I have before quoted says the young when first hatched have a curious look—little black imps, with a big head, fat body and tiny webbed feet, sprawling about the nest. They soon, however, become white, the down growing very rapidly and very thick, giving them, according to Yarrell, the appearance of large powder-puffs or masses of cotton.

The egg is much like that of the Cormorant, but rather larger.

Family LARIDÆ.

The family at which I have now arrived, the Laridæ or Gulls, might, I think, be conveniently divided into three—the Terns, the Gulls and the Petrels: as it is, however, it contains as many as forty-one British species, and twenty-eight of these must be included amongst the Birds of Somerset.

COMMON TERN, *Sterna Hirundo*. The first on my list, the Common Tern, is only an occasional spring and early autumn visitor to our coast: it does, however, sometimes make its appearance further inland, as it has been found as far from the sea as Bath.* The autumnal visitors are generally a mixture of young and old birds on their return from their breeding stations.

I do not believe any of these birds ever remain to breed in our county, although parts of the coast would appear to be well suited to that purpose, and a few of them do breed on the coast of the neighbouring county of Dorset.† Wherever their breeding station is, they do not appear to trouble themselves much with making a nest, the eggs being placed in a hollow on the bare ground, or occasionally amongst

* Montagu's Dictionary, by Newman.

† 'Zoologist' for 1865, p. 9676.

the pebbles on the beach just above high-water mark, without any hollow being made for them; occasionally also they are placed in hollows in the sand caused by drift sea-weed. The nests—if nests they can be called—are sometimes made in marshy places or on the borders of inland lakes.

The food of the Common Tern appears to consist almost entirely of fish, and perhaps occasionally a few insects. It is a very pretty sight to watch this bird when fishing, flitting along just above the water, dropping down every now and then to pick up an unwary fish that comes rather too near the surface, and sometimes going out of its beat a little to give a look at the shallow pools that are left by the tide on the sand, to pick up some small fish or shrimp out of this natural aquarium.

The adult bird in summer has the bill coral-red, black at the tip; the forehead, crown of the head and nape glossy black; the back, scapulars and wing-coverts gull-grey; the wings are much pointed, the first quill is the longest and much the darkest in colour, being dusky grey on the outer and part of the inner web; the rest of the inner web is nearly white, the shaft white; the tail is much forked, the outside feathers being the longest, the outer webs of all the feathers pale ash-grey, the inner webs white; the legs, toes and webs coral-red; claws black. The following description of the young birds is taken from some shot by myself at Exmouth in October:—

the bill is darkish horn at the point, reddish at the base: the forehead and top of the head white, interspersed with black; back of the head to and round the eye, and the back of the neck, black; back, scapulars and tertials gull-grey, each feather margined with pale brown and white; rump and upper tail-coverts gull-grey; wing-coverts gull-grey, margined with white; the small feathers above the lesser wing-coverts from the point of the wing to the body are black, very slightly margined with white;* the first primary is dark dusky on the outer and part of the inner web; the rest of the inner web is white, as is the shaft; the rest of the primary quills are dusky grey, margined on the inner web, and in the shorter ones nearest the secondaries on the point also, with white; the secondaries are gull-grey, but a darker shade than the wing-coverts, and are tipped with white; the tail is forked, the feathers dusky grey on the outer web, but this colour grows paler on the more central feathers, and paler, very nearly white,

* Yarrell does not mention this peculiarity, but in six specimens of the Common Tern which I have lately been able to examine,—all killed about the middle of October,—it is very conspicuous; and in one specimen, killed at the same time of year,—which, from the short tarsus, I have no doubt is a young Arctic Tern,—there is no dark line on the shoulder. I have not been able to examine specimens enough of the two species to be quite sure of this being a constant distinction, but I think it worth mentioning.

on the inner web; all the under parts are white; legs, toes and webs brownish orange.

The eggs are somewhat about the size of those of the Ring Dotterel, but not nearly so pear-shaped; the ground is a pale cream-colour, but seems to vary, one of my specimens having a much richer colour than the other: they are all much blotched with dark brown and dull purplish grey.

ARCTIC TERN, *Sterna arctica*. The Arctic Tern, like the last-mentioned species, is only an occasional spring and autumn visitor to our shores: it is so much like the Common Tern, especially the young birds, that it is perhaps difficult to say which of the two is the most common, as they get confounded with each other, and if they are only seen on the wing the difficulty of distinguishing them is considerably increased.

In the 'Zoologist' for 1864 (p. 9312), there is a very interesting account, by Dr. Saxby, of the nesting habits of the Arctic Tern. This account is the more valuable as Dr. Saxby says that in Shetland, where his observations were made, there was no other species of Tern, so there could be no mistake as to identity. The eggs, he says, are usually deposited on a sandy or gravelly beach, or on a ledge of rugged bank which has been broken by the winter gales: in such places the eggs are merely laid in a hollow scraped out by the bird; but if the soil of the bank happens to be wet a small quantity of gravel is some-

times interposed. Often, however, the eggs are laid amongst the short grass further inland, and then the hollow is found to contain a few pieces of dead weeds or dry grass by way of lining. The Arctic Terns seem to be very jealous of the appearance of any strangers near their breeding station, especially if they are of a mischievous or marauding disposition, for in the same paper Dr. Saxby gives the following account of their attacking a Hooded Crow that paid the colony a visit in search of eggs or young birds:—"Instantly," he says, "the whole colony of Terns arose and assailed him so determinedly that he was glad to make off towards the opposite shore, but the Terns followed him up like a swarm of bees, even after he had left the island: one made a dash at him, and he stooped to avoid the blow; another and another followed up the attack so rapidly that the Crow, dropping as each one approached, gradually descended nearer to the surface of the water without being able to rise a single foot. Lower and lower he went, until at last the tips of his wings dipped into the water, and then his fate was decided. The poor fellow cawed and struggled most desperately, and made tremendous exertions to rise, but this only hastened his end; his feathers became saturated, and soon his head dropped beneath the surface."

The food of the Arctic Tern, like that of the Common Tern, consists of fish, which it picks up in

the same manner, and insects, which it catches on the wing; and a party of these birds may occasionally be seen on a summer evening skimming above the meadows in pursuit of winged insects.*

As I said before, the Arctic Tern is much like the Common Tern, more especially in its immature plumage; but it may at any age be distinguished from that bird by the shortness of its tarsus, which in the present species only measures six lines, and in the Common Tern is as much as eight lines and a half: this appears to be nearly the only distinction between the immature birds, unless the dark mark along the shoulder of the wing, which I before mentioned when describing the Common Tern, should turn out to be a good distinction. In more mature birds the under parts are darker than in the Common Tern, being almost the same colour as the back. The following description of the adult bird is taken from a specimen shot at Stolford during the last week in April:—the bill is coral-red; irides very dark brown; the whole of the upper part of the head as far down as to the eye, and the nape of the neck are glossy black; the back, scapulars and wing-coverts are uniform gull-grey; the rump and tail-coverts are white; the primary quills are dusky grey, white on the inner part of the inner web, and the shafts are white; the tail is much forked, the two

* 'Zoologist' for 1865, p. 9766.

outside feathers on each side have the outer webs dark grey, the rest of the feathers white; the chin is white; the breast, belly and flanks are nearly the same shade of gull-grey as the back; the under tail-coverts are white; legs, toes and webs coral-red. With the exception, before mentioned, of the black markings on the wing,* the young birds of the year appear to be so like the Common Tern as to require no separate description, the only other reliable difference being the shortness of the tarsus.

The eggs are very much like those of the Common Tern, both in shape, colour and markings, but are always smaller.† Meyer's coloured picture, however, makes the ground colour darker and more dingy.

LESSER TERN, *Sterna minuta*. This pretty little Tern occurs occasionally in our county as a spring and autumn visitor, both on the coast and inland, for one of my specimens was shot as far inland as Taunton, while flying up and down by the river, in a place called Priory Fields, close by that town. Although only an occasional visitor to our county,

* I cannot help thinking that this is a distinction, as the bird without the markings was shot in October, at the same time of year as the other six, and therefore was probably of the same age and in the same comparative state of plumage.

† Yarrell, vol. iii., p. 515.

it is said to remain to breed in the neighbouring county of Dorset, though not in any great numbers.*

According to Yarrell, the Lesser Tern lays in any small accidental depression in the ground above high-water mark; but Mr. Eschscholtz Smith, a writer in the 'Zoologist,' says that the nests he found were not in an accidental hollow, like those of the Common Tern, but always scooped out, as stated in Mr. Newman's book, 'Birdsnesting.'

The food of the Lesser Tern consists of small fish, which it picks up when they come a little too near the surface, and small Crustacea, such as shrimps, and some sorts of insects. Meyer adds to these the more tender weeds that float on the surface of the ocean.

The Lesser Tern may immediately be distinguished from either of the other species by its much smaller size. The bill of the adult bird is orange-yellow, black at the tip; irides dusky; the forehead is white, which colour runs back on each side as far as the eyes; the top of the head, the nape, and a streak from the eye to the base of the upper mandible, are black; the back, scapulars, rump, wing-coverts and tertials uniform gull-grey; the upper tail-coverts and tail-feathers white; the tail is much forked; the outer primary quills dusky grey, the

* 'Zoologist' for 1865, p. 9766).

others are lighter, and all have a portion of the inner web white; the wing is much pointed, like the other Terns, the first quill being the longest; the secondaries are the same colour as the wing-coverts, but tipped with white; all the under parts are white; legs, toes and webs orange-yellow. One specimen in my collection, shot in August, has the top of the head much mottled with white. The young birds of the year, according to Yarrell, have the point of the bill dark brown, the base pale brown; the forehead and crown mottled with dusky brown and greyish white, more uniform in colour on the nape and darker; back, wing-coverts and tertials ash-grey, margined with dusky black; primaries slate-grey, the margins of the inner webs white; secondaries ash-grey; tail-feathers spotted with dusky grey towards the ends; chin, sides of the neck, breast, and all the under surface, white; legs pale brown.

The eggs are much the same shape as those of the Common Tern, but smaller in proportion to the size of the bird; "of a slate-colour, spotted and speckled with ash-grey and dark chesnut-brown." *

BLACK TERN, *Sterna fassipes*. The Black Tern appears to me a more common visitor to our county, both to the coast and inland, than either of the other species: its occurrences are always in the spring and autumn, on its way to and from its breeding

* Yarrell, vol. iii., p. 525.

station. The spring visitors are mature birds, and all that I have seen are in full summer plumage: they generally make their appearance about the middle of April, occasionally in considerable numbers, as I have heard of as many as thirty being seen together in one flock. The autumnal visitors arrive about the end of August, in flocks consisting of both old and young birds: many of the old birds are then changing from summer to winter plumage, the fore part of the head and neck being much mottled with white, but some of them are still in perfect summer plumage. The flock out of which I procured my specimens of young birds might have numbered from thirty to forty: they were rather dispersed about, hovering over the small pools left by the tide, in search of shrimps or small fish: some of them occasionally settled on the pool and swam about for a short time: they appeared very light on the water and to swim much like Gulls; they did not appear very wild, but easily allowed us to approach within shot, and had we been so disposed we might have killed a great many, probably the greater part of the flock, as they did not show much fear of our breech-loaders, but came and hovered over their dead companions, like Gulls: however, we contented ourselves with three each; one of these was an adult bird changing to winter plumage—all the rest were young birds of the year.

The Black Tern appears to be easily kept in

confinement, and to become very tame ; at least I can answer for one that I saw in the Zoological Gardens last summer ; it was so tame that it would take small fish from the keeper's hands. In a wild state the food consists of fish, small shell-fish, young frogs, frog-spawn, also various sorts of insects, which it catches very dexterously on the wing ; shrimps seem rather a favourite food, as many as fifteen full-sized shrimps having been found in the stomach of one bird.*

The Black Tern does not at present breed in any part of our county, although it may have done so in some parts before drainage and cultivation interfered with it : it still, however, breeds in some parts of England. The nests are said to be placed on tufts of grass and rushes, sometimes in very wet situations, and barely raised above the level of the water : they are made of flags and coarse grass.†

This bird is rather larger than the Lesser but smaller than the Common Tern. The adult birds killed in April had the bill black ; the irides dusky ; the whole of the head, neck, breast, belly and flanks black ; the back and all the rest of the upper surface smoky grey, lightest on the tail-coverts and tail, which is forked, but not so much as in some of the Terns ; the primary quills are much darker than the

* 'Zoologist' for 1866 (Second Series, p. 266).

† Yarrell, vol. iii., p. 530.

rest of the wing, nearly dusky grey; the vent and under tail-coverts are white; the legs, toes and webs very dark reddish brown; the webs are much indented, and the toes project some way before them. The adult bird before mentioned as having been killed out of the flock at Burnham, in August, had the fore part of the head and the neck very much mottled with white; in the full plumage these parts are quite white. The young birds shot at the same time had the bill nearly black; the forehead, the space between the bill and the eye, the fore part and side of the neck, a collar at the back of the neck, the breast, flanks, belly and all the under parts are white; the top of the head, nape and ear-coverts are black; the back and scapulars immediately behind the white collar almost black, the rest smoky grey, each feather margined with pale brown, palest towards the tips; the rump and tail-coverts light grey; the wing dusky on the shoulder; both sets of wing-coverts smoky grey, more or less margined with brown and tipped with white; the primary quills dusky at the points, more inclining to grey towards the base; the secondaries are dark dusky grey; tertials the same, narrowly margined with white; tail-feathers darker grey than the coverts, narrowly edged at the tips with white.

The eggs are said to be of a dark greenish or reddish olive, blotched and spotted with two shades of dark brown and very dark, nearly black: they are rather larger than those of the Lesser Tern.

SABINE'S GULL, *Larus Sabini*. The occurrence of three specimens of this rare little Gull at Weston-super-Mare have been recorded in the 'Zoologist' by the Rev. Murray A. Mathew,* and therefore it is perfectly entitled to a place in the list of Somersetshire birds, perhaps more so than some that I have mentioned. Being the only one of our British Gulls that has a forked tail, it seems very properly to come in this place, as it forms a sort of link between the Gulls and the Terns: on account of this peculiarity it may also easily be distinguished from any of our other Gulls in any state of plumage. Yarrell, quoting Colonel Sabine, who first noticed this bird when accompanying the Arctic Expedition of 1818, says that these Gulls collect at their breeding stations in considerable numbers, sometimes associating with the Arctic Terns, the nests, or rather the eggs,—for they make no nest, merely placing the eggs on the bare ground,—of both species being intermingled. The breeding stations are always in high northern latitudes, from whence only occasional stragglers reach as far south as England, generally making their appearance at the time of the autumnal migration, and most of these are young birds in their first year's plumage.

The food of this species appears to consist mostly

* 'Zoologist' for 1863 (p. 8692); for 1865 (p. 9470); and for 1867 (Second Series, p. 992).

of marine insects, and probably small fish. Yarrell, still quoting Colonel Sabine, says they get their food on the sea-beach, standing near the water's edge and picking up the marine insects that are cast on shore.

The following description of the young bird is taken from a specimen shot some time ago at Torbay, and now in my collection: it is in the plumage in which the greater number of British-killed specimens have been found. The bill in my specimen has of course faded considerably, but as there is no bird-stuffer's paint about it I can form a tolerable guess at the original colour, which seems to have been darkish horn towards the tip and yellowish brown at the base, and this agrees very nearly with the description of a recently killed-specimen in the 'Zoologist' for 1867 (Second Series, p. 543), but not quite so well with that given by Mr. Blake-Knox, also of a recently killed specimen, in the same journal for 1866 (p. 526), "bill thick for its length, dusky;" but the colour of the bills of all the Gulls varies very much as they advance in age, quite as much as the rest of the plumage. The forehead and the space between the bill and the eye white; the top of the head, nape, back, scapulars, wing-coverts and tertials dark grey, considerably darker than the usual grey of Gulls, and there is a dark, nearly black, streak near the margin of each feather, the margins themselves white; the tail-coverts white; the tail

considerably forked, white at the base, with a broad black band towards the end; "the shafts of the first six primaries brownish black at the base, becoming gradually darker towards the extremity, where they are black in the first three, but in the fourth, fifth and sixth assimilate in colour to the feather at that part, which is white; the entire of the outer webs of the first five black; the inner webs with a broad edging of white, to within from one to two inches of the end, which part is black in the first three, but tipped with white in the fourth and fifth; in the sixth the inner web is white, the outer black, excepting for three or four lines from the tip, where it is white, and again about an inch from the end, where a white spot of an oval form appears;"* the greater coverts of secondaries lead-colour, with deep white tips; chin, throat and sides of the face and neck white; breast white, clouded with ash-grey on the sides; the rest of the under parts white; legs, toes and webs flesh-colour. As to the full plumage, in which state, I believe, it has never been taken alive in England, Yarrell quotes Colonel Sabine as follows:—The bill one inch long, the base of both mandibles black as far as the angular projection of the under mandible, the remainder yellow; the irides dark, surrounded by a naked circle of bright vermillion; a small white speck beneath the eye, scarcely

* Yarrell, vol. iii., p. 552.

perceptible; the whole of the head and upper part of the neck a very dark ash lead-colour; the remainder of the neck behind and before, as well as the breast and belly, pure white; a narrow black collar surrounds the neck at the meeting of the ash-colour and white. The back, scapulars and wing-coverts ash-coloured, very much lighter than the head, but darker than the corresponding parts of the Blackheaded Gull (*L. ridibundus*); the lower ends of the scapulars are tipped with white; the first five primary quill-feathers with black shafts, the whole outer webs of these black, the edge of their inner webs white to within an inch and a half of the tips, the white sometimes continued to the tip; the tips of the first and second of these feathers in some white, in others black; the tips of the third, fourth and fifth white, giving the wing when closed a spotted appearance; the sixth primary with a white shaft, having the web more or less black, but principally white, with sometimes a black spot near the end; the other primaries, the secondaries and tertials, white; the whole of the under part of the wing white; legs, feet and claws black. The young are said at first to be mottled with brown and dull yellow.

The eggs are regular in shape, not much pointed; the colour olive, blotched with brown.*

* Yarrell, vol. iii., p. 550.

LITTLE GULL, *Larus minutus*. A few specimens of this pretty little Gull have been taken at Weston-super-Mare* and other parts of the county, but although not so rare as the last-mentioned species, it must nevertheless be looked upon, especially in our county, as a rare straggling visitor: in the neighbouring county of Devon it occurs more frequently, but neither there nor in any other part of England can it be considered very common. The majority of the specimens that occur in England make their appearance in the autumn, and are in immature plumage; although some do appear at other times of the year, and in perfect summer plumage. But little seems to be known about the breeding places or habits of this bird. Yarrell says, on the authority of Prof. Nilsson, that it is a summer visitor to the marshes in the vicinity of the Baltic and Gottland, where it breeds, but he gives no account of the nest.

The food of the Little Gull consists of small fish, worms and insects, amongst others the slender dragonfly.† It is occasionally seen seeking for food in company with flocks of Terns. One specimen I killed at Teignmouth was in company with a large flock of Kittiwakes, eagerly engaged with them in search of small sprats, which were just then extremely plentiful on that coast.

* 'Zoologist' for 1863, p. 8692.

† Id., 1867 (Second Series), p. 916.

This pretty little Gull is smaller than the last-mentioned species, scarcely if anything exceeding a Blackbird in size. Like all the Gulls it goes through considerable variations of plumage, according to its age and the time of year. In the full summer plumage the bill is reddish brown; irides very dark brown; the whole of the head and upper part of the neck all round is black, the neck below is white; the back, wing-coverts and wings uniform pale ash-grey; the outer primaries darker grey, with white at the end and on the inner margin of the inner web; the upper tail-coverts and tail-feathers white, the tail in form square at the end; all the under surface of the body and under tail-coverts white; legs, toes and webs vermilion.* In winter the forehead and upper part of the neck in front and on the sides, pure white; occiput and nape of the neck streaked with greyish black on a white ground; a dusky spot under the eye and an elongated patch of dusky black falling downwards from the ear-coverts; all the other parts as in summer.† A young bird in my collection, killed on the 24th of November, has the bill black; irides dark brown; all the fore part of the head, a broadish streak over the eye, chin, sides of the neck, throat, breast and all the under parts, white; there is a spot of black on the ear-coverts, and from thence to the eye, and immediately under the eye, the white

* Yarrell, vol. iii., p. 564.

† Id., p. 565.

mixed with grey; the back of the head and neck darkish grey; back and scapulars a beautiful silky gull-grey; there is a spot of white on the tip of the longer scapulars; the rump and tail-coverts white; ridge on the shoulder of the wing gull-grey; lesser wing-coverts black, narrowly margined with white; greater coverts dark grey, tipped with white; primary quills black, except the greater part of the inner web, which is white, edged with black for a short way from the tip; there is a little spot of white on the tip of each feather, getting broader on the shorter quills, the lighter parts of which extend to the outer web also, and are a sort of light gull-grey, instead of white; secondary quills gull-grey, tipped with white; tertials black, tipped with white; tail-feathers white, broadly tipped with black, except the outer feather on each side, which has only a small spot of black on the inner web. This very much agrees with Yarrell's description of a Little Gull killed in November, except that his bird has a white collar at the back of the neck, and immediately beneath this a broad black band, but about this time the young birds are probably losing this black band, much as the Kittiwake appears to do, which bird the Little Gull very much resembles in its earlier stages, more so than it does the other Blackheaded Gulls.

The egg is said to be olive-brown, spotted with two shades of reddish brown.

BLACKHEADED GULL, *Larus ridibundus*. Although common in many counties in England, especially in the eastern ones, I do not think that this Gull can be considered more than an occasional visitor to our county: when the marsh has been much inundated in the autumn I have seen several of them flying about over the flooded fields in company with other Gulls; and on such occasions I have also seen several at the birdstuffers' and poulterers' shops in Taunton, but these have all been immature birds. On our coast, however, I have never at any time of the year recognized this bird.

Like most of the other Gulls these birds collect in immense quantities at their breeding stations, but do not, like them, select the most lofty and beautiful cliffs on the coast for nesting purposes, but, on the contrary, repair to flat rushy bogs for that purpose. The following account of one of their breeding stations is taken from the 'Zoologist' for 1867 (Second Series, p. 832):—"As you approach the spot the birds begin to rise, and when you are fairly amongst the eggs all hover in a dense cloud over the nests: to endeavour to count them or to form any estimate of their number would be futile—as easy to say how many flakes of snow one could see falling on two acres of ground in a heavy snow storm; there must be many thousands. Not the least interesting is the fact that twenty-six years ago the colony consisted of only a limited number; now,

under the system of protection, they have increased to countless multitudes, and no doubt will continue to do so. The nests were very numerous on the 4th of April, when I was there, so much so that care had to be taken in stepping not to crush the eggs, but about the 15th, the keeper tells me, the number of nests will be greatly increased. The nests, composed of rough grass, rushes or pieces of stubble, were scattered broadcast, the centre of every tuft of rushes being occupied: the eggs numbered from two to four, generally three; the nests with two had probably not their proper complement."

The food of the Blackheaded Gull includes nearly everything it can pick up and swallow: it flits about the dirtiest of harbours and tidal rivers, picking up any floating substance it can find, however nasty, or over the bright blue sea, where it picks up any unfortunate fish that comes too near the surface: it frequents also ploughed lands, following the plough, like a Rook, in search of the worms and grubs that happen to turn up. Anywhere it is a very pretty sight to watch this bright-looking Gull on the feed, for neither ploughed fields nor dirty rivers ever seem to sully its plumage in the least, or to soil the bright red legs and feet, which it constantly lets down for a moment when picking anything from the water, as if it intended to stand on the surface. How omniverous this bird is may at once be seen from the numerous articles of food which Mr. Blake-Knox, in the

'Zoologist' for 1866 (Second Series, p. 364), says he has actually taken from its throat, at different times, "fish, grain, bread, candle-grease, pieces of oily cotton thrown from steamers, meat, vegetables, insects (particularly moths, dragonflies and water Coleoptera), worms, crustaceans, mollusks, Radiata, &c." He also adds that he has seen them feeding on and taking the ghost moth at night on the wing.

In the paper of Mr. Knox's, from which I have just quoted, he traces this Gull most accurately through all its changes of plumage, from the young bird in its down to the perfect plumage of the adult, both in summer and winter. The whole series of the various plumages would be much too long to quote here, but I shall select three stages, which I think will enable my readers to identify the bird at any period of its life. The first plumage after the down is as follows:—"Upper surface:—Head, top of head and nape from gape under the eyes to the ear-spot brown, clearly indicating the future hood; the forehead and a circle round the eyes whitish. The neck is white, except at its junction with the body, where it is banded by a deep band of dull brown, with fainter edges, not encroaching on the breast, but running down and forming an angle before the wings. The back, shoulders and scapulars deep brown, the edges wood-brown or tawny. Rump and tail-coverts white. Tail white, deeply banded at the end with black-brown; tips pale; first feather pure white,

seldom with dark at the end. Upper coverts of secondaries deep brown, with pale tips; the lower coverts of secondaries chiefly blue-grey; some are marked with brown. Under surface:—Yellowish white. Bill grey, flesh at the base, dark at the tip. Feet earthy flesh.” This plumage changes from August to October, partly by change of colour in the feathers and partly by moult; “the back, shoulders and scapulars are mixed with new blue-grey feathers, and the head with white; the band at base of the neck is also falling off.” A bird in my collection, killed in Curry Marsh about the middle of January, is exactly in this state of plumage, not even then having progressed further in its winter change: this backwardness in changing plumage Mr. Knox attributes to such birds being a late brood, the previous eggs having been taken, and very likely sent to London and sold for Golden Plover’s eggs, and this may probably account for it to a great extent, but I think some birds are slower than others in assuming their various plumages: on this I shall have a little more to say when we arrive at the Herring Gull, which I have had more opportunity of watching. The next plumage I shall quote is the adult in winter, at which state of plumage the bird appears to arrive about the November of its third year:—“Head, neck, rump and tail-coverts, tail, bastard wing and end primary coverts pure white, as are all the under parts and the margin of the wing; the spot before the eye and the ear-spot black. Back, shoulders,

scapulars and wing-coverts pale blue-grey. Feet and bill deep scarlet-carmine. Eye-lids reddish; irides hazel." The primary quills at this stage are—"No. 1, tip, including shaft for half an inch, black; rest of the shaft white; the outer web from the black tip for two inches pure white; the rest of the web consists equally of black and white, the black outwards; the inner web from the black tip for one inch all white; the rest white, edged with black, the edge growing deeper towards the pen. No. 2, entire tip for half an inch black; shaft white, except at the tip; all the lesser web but the tip white; inner web same as No. 1, but edged with black throughout. No. 3, tip deeper; inner web same as No. 2, black edge larger; lesser web white for two inches after the black tip; shaft, except at the tip, white. No. 4, the same; a white spot at the point; the black edge to the lesser web not so extensive; the white of the greater web bluish lead-colour. Nos. 5 and 6, closely similar; the rest are lead-colour, with a dark fringe. No. 7 has sometimes two black spots at the tip. As these quills remain on a year till the next autumnal moult the edges and tips are liable to variation from wear." Mr. Knox has given an equally accurate description of the quills in the first winter, which vary from this description in several particulars: the black, for one thing, is never so pure, being more a sort of dark dusky brown; but what seems the great peculiarity remains much the same—namely, the white centres

to most of the quills partially margined with black. Adult in summer as in winter, but with a dark soot-brown hood; the feet and bill arterial blood-red; eyes encircled with white; the under parts often pale or very rich rose-colour. This plumage seems to be completed about May, but it must occasionally be so rather earlier, as one in my collection, killed at Exmouth in the middle of March, has the hood nearly complete, only a few white feathers being interspersed.

The eggs are said to vary more than those of any other Gull, the ground colour of some being a light blue or yellow, and of others green, or red, or brown. One curious variety is mentioned in the 'Zoologist' for 1867 (Second Series, p. 832), namely, white all over, with the exception of a black cap on the large end, covering about one-sixth of the shell.

KITTIWAKE, *Larus tridactylus*. This pretty little Gull is by no means uncommon throughout our coast, and although generally speaking a very sea-faring Gull (not frequenting harbours and tidal rivers so much as some of the other Gulls), it does occasionally make expeditions inland, generally under stress of weather. I have one very perfect adult specimen, which was picked up in an exhausted state and almost dead, on Crowcombe Heathfield, during some rough weather in March, and specimens have been picked up still further inland, for I see notes in the 'Zoologist' about specimens having been found

dead from starvation, one even in Leicestershire, near a place called Earl Shilton, said to be the very centre of England.*

On the south coast of Devon, off Teignmouth and Exmouth, the Kittiwakes appear to me at times to exceed any of the other Gulls in number: they appear in these great numbers generally about November, when the sprats are about, and I have often on a calm day rested in my boat, watching them all around me: they do not appear to show the slightest fear, but come close round the boat—so close that on one occasion a boy who was with me struck at them several times with the paddles, and they were quite within his reach. Sometimes they pay rather dearly for their boldness, as their human persecutors often attack them on such occasions, when it is perfectly impossible to pick out a clear shot, more than one almost always falling to a shot, to say nothing of how many go off wounded. Moreover, as the Kittiwakes always come to look at a dead or wounded companion, they afford certain opportunities for slaughter. When these gatherings take place the Kittiwakes seem to be almost innumerable. I have just quoted a description of the Blackheaded Gulls, comparing their numbers on their breeding ground to the flakes of snow falling upon two acres of land during a heavy snow storm:

* 'Zoologist' for 1868 (Second Series, p. 1213).

I am sure I might truthfully apply this description to the number of Kittiwakes to be seen over forty or fifty acres of sea, except that they are not absorbed as the snow would be; but the same birds are continually reappearing, rising and falling nearly over the same place, then flitting along for a little way, then stopping to hover over a fish that appears to come near enough to the surface for a dash; occasionally disappearing under the surface for a few moments, when they make a dash,—not indeed the magnificent and rapid dash of the Gannet, but yet with sufficient force to carry them entirely beneath the surface,—and occasionally just dropping down to pick up a fish that has been wounded in some way, probably by a dog-fish, and again rising to the surface. Many other birds take part in these attacks on the poor sprats and herrings, but, as I have before stated, most of them shear off on the approach of a boat, except the Kittiwakes and a few Razorbills and Guillemots.

The Kittiwake is not nearly so omnivorous as most of the other Gulls, confining itself almost entirely to a diet of fresh fish; consequently it is not so often found searching tidal rivers and harbours for miscellaneous scraps, but is generally employed in fishing further out than most of the other Gulls.

The Kittiwake does not, like the Blackheaded Gull, seek flat swampy places for its nest, but rather

chooses to place it amongst lofty cliffs, on narrow ledges or inaccessible pinnacles of rocks. "The nest itself is composed of a layer of mud at the base, on which is laid a thick matting of dry campion-stalks; it is lined with shreds of grass and seaweed. The foundation of this nest appears to be a permanent structure, as the Kittiwake does not build a new nest every year, but partly demolishes the old one, and adds fresh dry weeds." *

Like all Gulls the Kittiwake varies much in plumage, according to its age and to the time of year. The young bird has the bill black; the whole of the head and neck white, except a spot of black on the ear-coverts and some hair-like black feathers under the eye; round the lower part of the back of the neck is a band of black which reaches to the sides of the breast; between this and the back is a band of white; the back and scapulars are gull-grey, some of the longer scapulars tipped with white; the lesser wing-coverts are black, making a broad black mark from the point of the wing to the tertials; the tertials are gull-grey, tipped with white, and some of them marked in the centre with black; the primary quills are black, except a long patch of white on the inner web; the shorter quills are tipped with white also, and the other light parts are more inclining to grey than white; the tail is white, with a broad black

* 'Zoologist' for 1868 (Second Series, p. 1367).

band at the tip; the legs, toes and webs are black. In this state of plumage it is the "Tarrock" of Bewick and some earlier authors. The black band at the back of the neck is the first part of this Tarrock plumage which disappears—Mr. Blake-Knox, in his paper on the plumages of the Kittiwake ('Zoologist' for 1867, p. 548), says—in the second summer; but it is not equally clear from his paper when the bird loses the black markings of the wing: they certainly appear very reluctant to depart entirely, for I have seen birds, otherwise in nearly adult plumage, with a few black specks still left on the lesser wing-coverts, and I have shot, in November, out of the same flock, and indeed at the same shot, birds in perfect Tarrock plumage, with the black band at the bottom of the neck quite perfect, and others again in which that had entirely disappeared, but the Tarrock markings on the wings were still quite perfect: these birds were then exactly in the same plumage as the Little Gull before mentioned. The following description of the adult in winter plumage is taken from the bird before mentioned as having been picked up at Crowcombe Heathfield in the beginning of March: it does not appear at that time to have been at all changing to its summer plumage:—the bill is lemon-yellow; the forehead to the top of the head, space from the bill to the eye, all under the eye and a patch behind the eye, chin, throat, breast and all the under parts, tail

and tail-coverts white; round the eye are a few hair-like dark feathers; the top of the head mixed gull-grey and white; back of the head and neck grey, with a longish spot of dark lead-grey, nearly black, behind the ear-coverts; the grey at the back of the neck runs down towards the breast, where the black mark is in the young bird; the white mark remains, but not so well defined; back, scapulars and wing-coverts gull-grey, except a few of the longer scapulars, which are tipped with white; the four first primary quills are black at the tips, the first black on the outer web also, the rest of these feathers are pale gull-grey, nearly white; the fifth has a light gull-grey spot at the extreme end of the black tip; the sixth has only a very small spot towards the tip of the outer web; the rest of the feathers gull-grey, margined on the tip and outer web with white; the secondaries and tertials are gull-grey, tipped with white; the legs, toes and webs are a sort of dull olive-brown. The summer plumage of the adult only differs in having the whole of the head and neck, as far as the white below where the black band was, white.

The eggs are said to vary greatly in colour and markings, from a creamy blue, speckled with slaty brown (varying in every shade of brown), to a rich deep umber, clouded with darker blotches.*

* 'Zoologist' for 1868 (Second Series, p. 1367).

IVORY GULL, *Larus eburneus*. This beautiful but rare Gull has occurred on our coast, though very seldom. Mrs. Turle, the birdstuffer, at Taunton, has had one or two Somersetshire specimens of this bird through her hands, one of them killed, I think she told me, in the marsh, when it was flooded; but I am not quite certain about this. The Rev. Murray A. Mathew, in the 'Zoologist' for 1865 (p. 9470), mentions a specimen which had been taken at Weston-super-Mare, and kept for some time as a pet: he also mentions another specimen, which had been taken at the same place, but this he subsequently found out was not an Ivory Gull, as it was much too large and without the black legs: as to what species of Gull it was he seemed to be quite at a loss; he described it as being as large as a young Great Blackbacked Gull, snow-white all over, with legs and bill of a uniform greenish flesh-colour. I only mention this specimen, as, should it turn out not to be a mere variety, and its species be ascertained, we shall have to add it to the list of Somersetshire birds.

The Ivory Gull, though rare, has been taken in both the neighbouring counties of Devon and Dorset. It is an arctic bird, inhabiting and breeding in very high northern latitudes, from whence it only occasionally wanders to our shores. It is said to make a nest of sea-weeds on the bare rocks.*

* Meyer's 'British Birds,' vol. vii., p. 143.

Though so delicate in appearance this bird quite equals other Gulls in the extent of its appetite and the variability of its food, which consists for the most part of fish and dead and putrid matter.* It is a constant attendant on the flensing operations of the whale fishers.

Yarrell describes the adult bird as follows:—The bill greenish grey at the base and about the nostrils, the rest yellow; the whole of the plumage, including the wing and tail-feathers, a pure and delicate white; legs short and black. The adult in winter, he says, has a few greyish streaks or lines about the head; and the young birds, like most of the other young Gulls, are more or less mottled with pale brown.

The eggs are said to be olive-coloured, spotted with brown.†

COMMON GULL, *Larus canus*. The Common Gull, although perhaps not quite so common as the Herring Gull or the Kittiwake, is nevertheless a numerous species on our coast; but I do not know that it breeds on any part of it, though from its wide range of breeding grounds it might easily find situations to suit it. Mr. Blake-Knox, in his paper on the Common Gull, in the 'Zoologist' for 1867 (p. 625), says its favourite breeding places are the shores of lakes or salt marshes, unfrequented islands or rocky cliffs. The nest is placed by the water's

* Meyer's 'British Birds,' vol. vii., p. 144. † Id. p. 143.

edge, on the face of the frowning precipice, and on the top of the dizzy cliff, amongst sedgy grass, upon the cold rock, and amongst the green samphire or the crisp ling: it is composed of grasses, ling, dry sea-weed and other floating rubbish, turf and various other dry substances. The scattered stones of an old ruined stone wall also seem a favourite nesting-place.

The Common Gull, like the Blackheaded, feeds more about the mouths of harbours and in tidal rivers than the Kittiwake: it is consequently less partial to a merely fish diet, but eats nearly anything than comes within its reach, devouring greedily biscuit, bread, fat, mess pork, oil and tallow, but its favourite food seems to be oil or grease, in obtaining which it shows the greatest perseverance and ingenuity.* It also occasionally feeds inland upon insects, worms and grubs.

Like other Gulls this bird takes a long time arriving at maturity, quite four years, during which time it goes through many changes of plumage: all these changes are accurately pointed out by Mr. Blake-Knox, in the 'Zoologist' for 1868 (Second Series, p. 1075): according to this paper, the first summer plumage after the down is as follows:—"The head and neck are white, spotted with brown; the upper surface of the body and wings, except the

* 'Zoologist' for 1867 (Second Series, p. 625).

upper tail-coverts, dark brown, barred with paler brown. Wing-quills brown and black. Tail black and white, as are its upper coverts. Under surface of the body white, transversely marked with cinereous-grey or dull brown, the centre of the belly being generally, however, plain white. Bill, basal half flesh-colour, point half black. Feet dull flesh-colour. Irides dark brown." One shot by me at Teignmouth, on the 17th of October, is in a transition state from this to a more mature plumage: the head, neck, breast and flanks are white, streaked and spotted with pale brown; chin white; the back and scapulars nearly half and half gull-grey and pale brown, the brown feathers (which are the remains of the former plumage) margined with white; the lesser wing-coverts pale brown, margined with white; the greater the same, but slightly tinged with gull-grey at the base, which looks as if the change of colour was coming in those feathers by transmutation rather than moult; the tertials are darkish brown, tipped with white. Another specimen, shot by me at Teignmouth, appears to agree very closely with Mr. Blake-Knox's description of the third winter plumage: the bill and legs were grey (till Mrs. Turle painted them bright red); the whole of the head and neck white, streaked and spotted with dusky, except the chin, which is plain white; the breast much spotted with palish brown; the back, scapulars, wing-coverts and tertials gull-grey, except the tips of some of the

longer scapulars and the tertials, which are white; upper tail-coverts and tail-feathers white; belly and under parts white; the longer primary quills have no white at the tips, but there is a large spot of white a little way below the tip in the first two; the rest of these feathers are black, except a point near the base, which is grey; this colour increases in the shorter quills, the tips of which are white, those nearest the body having no black at all. Another specimen in my collection, shot at Exmouth in the middle of November, has the bill nearly all yellow, except a greenish dusky cloud about the projection of the lower mandible; the forehead, lore, chin, fore part and sides of the neck, breast, belly, flanks, tail-coverts and tail, white, except a very few feathers on the breast, which are slightly clouded with dusky; the back and scapulars are gull-grey, except some of the longer scapulars, which are tipped with white; the secondaries and tertials are gull-grey, tipped with white; the longer primaries are much the same, except that the black and white are both more pure and distinct and the tips are white. "In summer the adult has the whole of the head and neck white; the breast and belly vividly suffused, like a sunset tint, with maize-salmon or rose-colour; the bill bright pure chrome-yellow; the irides are drab-grey; the feet intense canary-yellow." *

* 'Zoologist' for 1868 (Second Series, p. 1086).

The eggs are of a dark olive-brown, spotted with darker brown and black: they are a little smaller than those of the Herring Gull.

LESSER BLACKBACKED GULL, *Larus fuscus*. Although we are not far from Lundy Island, one of its breeding stations, this bird is by no means numerous on our coast: occasional specimens, however, both of old and young birds, may be seen there. It does not appear to me to be anywhere so common as the Herring Gull, with which it occasionally mixes, both at the breeding stations and when in search of food. At none of the large breeding stations which I have been able to visit, such as Lundy Island and the Channel Islands, especially Sark and Alderney, have I ever seen the present species in anything like the numbers of the Herring Gulls; I should say about one pair to fifty of the "Herringers." The Lesser Blackbacked Gulls appeared to place their nests much in the same situation as the Herring Gulls—among the crags on the cliffs; but Mr. Walker, in the 'Zoologist' for 1868 (S. S., p. 1371), says the Lesser Blackbacked Gulls breed on the dome of Ailsa, amongst the broken fern and campion leaves. The nests are difficult to find; they are generally made at the foot of a rock or stone in a slight depression in the ground, and lined with leaves and dry grass.

This Gull is easily kept in confinement, and may be fed on almost anything. Dr. Saxby, in the 'Zoologist' for 1865 (p. 9402) says of one thus

kept in Shetland for upwards of twenty-two years that anything that was eatable seemed to suit her appetite, even oatmeal porridge was not refused, and fish, raw meat, birds and mice never seemed to come amiss. This tame Gull used regularly to make a nest and sit upon it for some short time, but had not the same amiable propensity for hatching other birds' eggs and bringing up the young ones as the Buzzard mentioned at p. 25, for if eggs were given her she invariably ate them.

In a wild state the food of the Lesser Blackbacked Gull consists principally of fish; but, according to Yarrell, both the young and old birds go inland to search moist pastures or recently-ploughed fields for worms, insects and their grubs. It also steals the eggs of the Guillemot, Razorbill and other birds inhabiting the rocks: probably this propensity in the various sorts of Gulls is one reason why the other rock birds usually have their breeding station a little separate from them: I have never seen them actually mixed together, even at Lundy, where space is limited, and the various species of birds very numerous.

The plumage of this Gull varies much, according to the age of the bird. In the young bird the bill is black; irides dark brown; the head and neck streaked pale brown and white; the back and scapulars are dullish white, much barred and mottled with brown; the wing-coverts and tertials have more brown in them; the primary quills are dusky brown, some of

the shorter ones very slightly edged with dull white at the tips; the breast, belly, flanks and under tail-coverts are white, mottled with pale brown (paler than on the back), mostly on the breast and flanks; the tail is white, much barred and mottled with brown. A bird in intermediate plumage, shot on the 17th of July, has the bill generally dark horn-colour, with occasional irregular patches of yellow, and two small patches of red on the angle of the lower mandible; the extreme tip of both mandibles is light horn-colour; the head, neck and breast are dirty white, with a few small streaks of brown on the nape; the back and scapulars are nearly all new feathers the same as in the adult, but a few of the old ones are still left; these are of a paler colour and tinged with brown; the wings are quite a muddle of pale brown, dark brown, and a few feathers as in the adult; the lesser wing-coverts are the palest brown, and this colour is disposed much more regularly on one wing than the other; the primary quills are dark dusky brown, without any white tips, except on a few of the shorter ones; the secondaries are much the same, tipped and partly margined with dirty white; the tertials are the same, except one or two feathers which are like the adult; the rump and tail-coverts are white; the tail-feathers, except the second and third from the outside on each side of the tail, are white; these four feathers are the old feathers not moulted, and are white, much mottled with

brown, especially on the inner webs; the tips are brown, edged with white: in this specimen nearly the whole of the old feathers are excessively ragged and worn; the tips of some are quite worn off, the shafts being left projecting. The adult bird has the bill yellow; the angle on the lower mandible red; irides straw-yellow; the whole of the head, neck all round, breast, belly, flanks, tail and tail-coverts, pure white; the back, scapulars, wing-coverts and tertials dark slate-colour, approaching to black; the longer scapulars and the tertials are tipped with white; the primaries are black, tipped with white; legs and feet yellow.

The eggs vary in colour, some being of a dark olive-brown, and others pale drab: they are spotted with ash-grey and two shades of brown.

HERRING GULL, *Larus argentatus*. This Gull seems to me by far the most common of all the Gulls, both on our channel, the Bristol, and on the English, outnumbering either the Common Gull or the Kittiwake. It breeds in great numbers at Lundy Island and many other places on both sides of the Bristol Channel, generally amongst the grandest and most lofty cliffs, where the birds enliven the scene by their wild cry and yet wilder laugh, which, by the bye, always reminds me of the Zoological Gardens, even though anchored in Lundy Roads or scrambling over the wild cliffs of Alderney or Sark.

I am sorry to say at many of the breeding stations

the Herring Gulls, like the other sea-birds, suffer great persecution, and are ruthlessly slaughtered by hundreds, partly as a matter of trade, many of them being killed to procure feathers for ladies' hats and muffs, and partly by cockney sportsmen, to whom a young Gull standing on his ledge of rock, and not yet able to fly off, presents a mark which may be hit without much hard work, and in both these ways the young birds and the old ones who are engaged in feeding them get killed up. I hope the Act recently passed, and to which reference has previously been made, will be effectual in securing for the poor birds a little respite during the breeding season.

The nest of the Herring Gull is placed on a ledge of the cliff or the flat top of an isolated crag, and is made of long grass and weeds.

As to food the Herring Gull seems to be a most omnivorous fellow — probably herrings form the smallest part of his food. My tame ones feed indiscriminately on fish, flesh or fowl, rats and mice, small birds, young Ducks or Moorhens (if the mother is not near to protect them, for the Gulls have not the pluck to face an angry old Moorhen), Ducks' eggs, worms, grubs, bread, potatoes, barley-meal, and occasionally, but very seldom, a few grains of barley. I have seen them catch rats nearly half-grown almost as dexterously as a terrier, give them a good grip at the back of the neck and throw them down hard on the gravel-walk: after two or three

throws the rat was generally in a fit state to be bolted, which he was, head first. The Rooks are rather enemies to my Gulls, as they are nearly as tame and know the feeding times quite as well, and, being able to fly, carry off the best bits under the very noses of the Gulls, who can do nothing but scream; but a fight between Rooks and Gulls for food seems nothing unusual, as I have constantly seen them, at Teignmouth, after the seine has been drawn for sand-eels, have great squabbles for the possession of these little fish, of which they both seem equally fond. The wild Herring Gulls do not appear to be a bit more particular in their choice of food than the tame ones, as they search about harbours, roadsteads and tidal rivers for any floating substance that may serve as food, and keep a constant look out for scraps thrown from vessels. I have even seen one follow the steamer from Alderney quite across the channel to the Needles, constantly wheeling round and round, and keeping a very sharp eye upon anything that was thrown overboard. In some places the Herring Gulls seem to do much mischief, especially in hard weather, for Dr. Saxby, writing from Shetland, in the 'Zoologist' for 1866 (Second Series, p. 214), says he has often seen them feeding in the turnip-fields during a frost, and has found their stomachs filled with pieces of turnips: he adds that in spring they feed on newly-sown corn, and consume considerable quantities of

it; but, he further adds, they compensate for this mischief by feeding on worms and grubs, to obtain which they constantly follow the plough, like Black-headed Gulls.

Like all the Gulls, the Herring Gulls go through a great variety of changes of plumage before coming to maturity, which they do not arrive at for some years: to refer again to my tame ones, they have not yet (January, 1869) acquired their full plumage, although they were caught in July, 1866. There is one peculiarity worth mentioning in these birds, that although they were all caught at the same time and place, and none of them were then able to fly, they have changed their plumage very differently, one of them being now, and always having been, since they first began to change, much in advance of the other two: whether this is to be attributed to their being in a state of domestication, or whether in a wild state there would have been the same difference, I am not certain; but if there would have been, I think it must be attributable to difference of sex: what the sexes of mine are I do not at present know, but by their manners to each other I should say it was "two maids wooing a man;" if so the male is certainly a full year in advance of the other two. The young birds of the year have the bill black; irides dark brown; the plumage very much resembles that of the young of the Lesser Black-backed Gull. The first note I have of any material

change from this plumage in my tame ones is the 13th of October, 1867, the year following their capture: "One of the Gulls assuming his grey plumage, many of the gull-grey feathers appearing amongst the brown ones on the back and scapulars: at this time it very nearly agrees with the young Common Gull (described at p. 602); the others are still much in the same plumage they were in last year." The next note is in May of the following year, 1868: "The Gulls have their bills all yellow now, except a small band of black all round near the tip; irides light greyish yellow." Then, on the 8th of July: "The most forward of the Gulls has just grown one new quill-feather, black with the white spot at the tip, and the black on the bill is reduced to a small spot near the tip, and the red is just appearing on the angle of the lower mandible:" this afterwards disappeared and has not yet returned. Towards the end of July they began to change towards winter plumage, for the heads and necks, which had just become quite white, then got gradually streaked with pale dusky brown: on the 8th of August the most forward completed his white tail. At the present time (the end of January, 1869) the irides of all are pale yellow; the bills yellow, except a black patch about the angle of the lower mandible, which extends up the sides of the upper mandible, but not over the ridge,—the extreme tips are pale horn-colour; the gull-grey is gradually supplanting the brown on the

back, scapulars and wing-coverts, and has quite done so in the most forward one: this one indeed is quite in adult winter plumage, except a few of the secondary quills, which retain a little of the old brown markings; but for this and the black on the bill he could not be distinguished from the adult bird in winter; but the other two have many of the brown feathers remaining on the upper parts, especially on the wing-coverts; the primary quills are not changed, the dark part being dark dusky brown, and there is no white spot at the tip; the tail-feathers are all mottled with dark brown; the breasts and flanks much clouded with pale brown; the legs and feet of all three are pale flesh-colour. The adult bird in summer has the bill yellow, with a patch of red on the angle of the lower mandible; irides straw-yellow; the whole of the head, neck, breast, belly, flanks, tail and tail-coverts pure white; the back, scapulars, wing-coverts and tertials gull-grey; the longest of the scapulars and the tertials tipped with white; the longer primary quills are nearly all black, with gull-grey on some part of the inner web, and distinct triangular patches of pure white at the tips. The only change in the winter is on the head and neck, which are then streaked with palish brown; the legs and feet are pale flesh-colour.

The eggs are of a light olive-brown, spotted with two shades of dark brown: they are very much like

those of the Lesser Blackbacked Gull, and the remark I made on the eggs of the Hobby, Merlin and Kestrel, will apply equally well to these two Gulls; and perhaps occasionally a large Herring Gull's egg may be passed off as that of the Great Blackbacked Gull.

GREAT BLACKBACKED GULL, *Larus marinus*. There is always one of these splendid Gulls to be seen about Burnham, and I seldom go there without seeing him: whether it is always the same, or whether there are more of them about, I cannot say, but I have never seen more than one at a time there; but this seems to be rather a peculiarity of the species, as they do not ever appear to be very sociable or to congregate in flocks as the other Gulls do, but to keep about singly or at most in pairs. They are generally very wary birds and difficult to approach, except at their breeding places, or when very busily employed in feeding. My Burnham friend, I am glad to say, is great on this point, and unless one of the Rifle Volunteers happens to make a long shot at him, I think he is very likely to live out the term of his natural life.

The nearest breeding station of these Gulls now is Lundy Island, for although they used to breed on the Steep Holmes, I believe they do so no longer, as that little island is almost destroyed as a breeding station by Government fortification works and Bristol and Cardiff excursionists. The nest is either placed

on the uppermost shelf of isolated rocks or upon some unfrequented grassy island: it is of considerable dimensions, made of sea-weed, herbage and sticks, mixed up with earth.*

The Great Blackbacked Gull is a very ravenous bird, feeding on nearly anything that comes in its way, perhaps carrion for choice, and human flesh by no means objected to, for Dr. Saxby, in the 'Zoologist' for 1865 (p. 9486), says that a Shetlander, having climbed to the nest of a bird of this species in order to take the young, found a man's finger, which had been brought to them for food. Ducks, when wounded (and perhaps even when not wounded), are occasionally attacked on the water and killed: eggs also seem to be fully appreciated.

In plumage this bird is so like the Lesser Blackbacked Gull in all its stages that it is scarcely worth while to describe it: it may always be readily distinguished from that bird by its great superiority in size, its whole length being as much as thirty inches, while the Lesser Blackback is only twenty-three inches in length, and the better-known Herring Gull varies from twenty-two to twenty-four inches. The bill and legs also differ from those of the Lesser Blackback, the bill being pale yellow, the angle on the lower mandible orange; the legs and feet flesh-colour.

* Meyer's 'British Birds,' vol. vii., p. 159.

The eggs vary in colour, but the more general appears to be a yellowish brown, tinged with green and sparingly spotted with slate-grey and dark brown.

GLAUCOUS GULL, *Larus glaucus*. The Glaucous Gull, which fully equals in size the last-mentioned species, is a northern bird, seldom visiting the more southern counties of England: it has, however, been taken in most of the counties, including the neighbouring county of Devon: in this county I have been informed by the Rev. Murray A. Mathew that it has been taken at Weston-super-Mare, and Yarrell's drawing is from one that was taken on the Severn near Bristol.

The Glaucous Gull is not very particular about its diet, eating nearly any sort of animal food or carrion: it kills and eats small birds, as their bones have been found in its stomach, and one when shot disgorged a Little Auk, and a second was found in its stomach.* It feeds also on whales' flesh and any fish or shell-fish it can get, and it robs the nests of other sea-birds, and eats either eggs or young: it seems also occasionally to try a vegetable diet, as its stomach has been found filled with sea-weed.†

Yarrell quotes two accounts of the nesting propensities of this bird, one of which says that the

* Yarrell, vol. iii., p. 619.

† 'Zoologist' for 1865, p. 9521.

eggs are placed on the shingle above high-water mark, where the full power of the sun falls, and the other that the nests have been found occupying the pinnacles of rocks and the projecting ledges of cliffs on the sea-shore.

“The adult bird has the bill yellowish white, the angle of the lower mandible reddish orange; irides straw-yellow; all the plumage nearly white, but with a tinge of skim-milk-blue over the back and wing-coverts; primaries white; the legs and feet are flesh-colour.” By the peculiarity of the markings of the wing-coverts and primaries, the present species and the smaller, but equally rare, Iceland Gull may be immediately distinguished from any of our more common Gulls, all of which have more or less black or dark dusky brown on the longer quill-feathers. “The young bird has the bill pale brown at the base, the point dark horn-colour; irides dark; the head, neck, back and wing-coverts a mixture of pale ash-brown and dull white; scapulars and tertials transversely barred with pale brown and tipped with greyish white; primary and secondary quills uniform pale yellowish grey; upper and under tail-coverts dull white, barred with pale brown; the tail-feathers uniform yellowish brown; the wings only reaching to the end of the tail; the chin, throat and breast dull white, mottled with pale brown; the belly more uniform in colour and greyish brown; legs and feet livid-brown.” These descriptions are from Yarrell.

According to Yarrell, the eggs are of a stone-colour, spotted with ash-grey and two shades of reddish brown.

RICHARDSON'S SKUA, *Lestris Richardsonii*. All the Skuas seem to make themselves particularly disagreeable to the rest of the family to which they belong, for the most part obtaining their food by persecuting the other Gulls and Terns till they are obliged to disgorge any prey they may have recently taken, which the Skua immediately picks up and appropriates. When watching the flocks of Kittiwakes fishing off Exmouth I have occasionally seen this system of persecution carried out: a Pomarine Skua will pick out a Kittiwake that has been indulging rather freely in sprats, and follow him up: no dodging of the Kittiwake amongst the crowd of his companions will do; the Skua sticks to him till eventually he has to disgorge his sprats, which the Skua immediately swallows. As this is the general character of the Skuas, the term "*Lestris*," from the Greek word *Ληστρος*, "a robber," especially "a sea robber," is applied to these birds with more propriety than is usual in ornithological classics.

Of the four British Skuas I can only bring two actually into Somersetshire, although both of the others have been taken in the neighbouring counties of Devon and Dorset, and Yarrell mentions one of them, the Common Skua, as having been taken on the Severn, but does not say in what part. The

Rev. Murray A. Mathew informs me that an immature specimen of the present species has been obtained at Weston-super-Mare, and that is the only instance I know of its occurrence in the county. This, like the rest of the Skuas, is a northern species, only visiting our southern counties in the autumn and winter, probably following the other birds that follow the herrings and sprats. It remains, however, to breed in the more northern parts of the kingdom, such as the Shetlands and Orkneys, where it appears to occupy very high hills and moors as its breeding station, scratching a hole amongst the heather for a nest, which it lines with dry grass and moss. They appear to endeavour to lead the searcher for eggs away from their nests, much in the same manner as the Peewits do, by pretending to be wounded and fluttering along the ground; but Dr. Saxby says this habit is not confined entirely to the breeding season. At all times, he says, they are fond of sitting half buried amongst the heather and grass, more particularly in rainy or foggy weather.*

The food of this and the other Skuas appears to consist mostly of fish and other things which they can bully the Gulls and Terns into disgorging for them: besides this bold sort of highway robbery they take every opportunity that offers of stealing

* 'Zoologist' for 1864, p. 9240.

and sucking the eggs of the Gulls, Guillemots, &c., that are unfortunate enough to be too near neighbours during the breeding season.

I have taken the following description of Richardson's Skua from Yarrell:—"The young bird in its first autumn and winter has the base of the beak and cere brownish grey, the rest black and much curved towards the point; irides dark brown; the head and neck pale brown, streaked with dark brown; back, wing-coverts and tertials umber-brown, margined with wood-brown; wing-primaries brownish black, tipped with pale brown; the tail-feathers pale brown at the base, then brownish black to the end, the central pair half an inch longer than the others; neck in front, breast, belly and under tail-coverts pale yellowish wood-brown, and transversely barred with umber-brown; legs and base of the toes yellow; ends of the toes and webs black," hence the bird is at this period sometimes called the "Blacktoed Gull;" as the bird increases in age the yellow is lost by degrees. The next stage noticed by Yarrell he supposes to be arrived at in the second year: the plumage is of a uniform greyish umber-brown, the whole of the light brown margins having disappeared. After this stage a few yellow hair-like streaks appear on the sides of the neck; next, the sides of the neck become lighter in colour, and in advancing age the neck all round becomes white, tinged with yellow, the head remaining the

same colour as the back. As in all our Skuas the two middle tail-feathers project beyond the rest in the present species as much as three inches, but this of course must vary according to circumstances; for instance, a bird shot soon after the moult might not show any trace of these feathers being longer than the others, or they might have been lost by accident and not replaced at the time of capture. According to the respective measurements given by Yarrell, this Skua is a little longer than the Kittiwake, the whole length, with the exception of the two longitudinal feathers, being seventeen inches, and that of the Kittiwake fifteen inches.

In the 'Zoologist' for 1864 (p. 9240), Dr. Saxby describes the eggs as the most beautiful which are to be found in the Shetland Islands, varying from very dark and almost uniform olive-brown to clear bright spotless green: specimens beautifully zoned are of frequent occurrence.

BUFFON'S SKUA, *Lestris Buffonii*. One specimen of this rare arctic Skua has occurred in this county: this occurrence was noticed by the Rev. Murray A. Mathew, in the 'Zoologist' for 1863 (p. 8448), who says that it was shot near Wellington, on the property of Mr. Sanford, of Ninehead Court, towards the end of October, 1862: he adds that, although in perfect adult plumage, the two elongated tail-feathers were missing, seemingly having been just shed. On examining this specimen a short time ago, amongst

Mr. Sanford's other birds, these feathers did not appear to me to be entirely missing, but were evidently just growing, and did not project more than half an inch beyond the rest of the tail-feathers, instead of nine inches, which appears to be their usual length. Wellington, near which place this bird was shot, is a considerable distance (nearly fourteen miles) inland from the coast of the Bristol Channel, the nearest sea; but this bird appears to make occasional expeditions inland, as it has been killed at Thetford, in the interior of Norfolk, and in Huntingdonshire.

The food of Buffon's Skua appears to be much the same as that of the last-mentioned species, but perhaps it is not quite such a plunderer as some of the other Skuas, as it has been shot when following the plough in search of worms: it has also been proved by dissection to have fed upon beetles.

I do not anywhere find much description of the breeding habits of this bird, but, as far as mentioned at all, they appear to resemble those of the other Skuas.

This is rather a smaller bird than Richardson's Skua, but the long middle tail-feathers project further beyond the rest of the tail. The adult bird, according to Yarrell, has the base of the bill, including the cere, dark greenish brown, the horny point black; irides brown; all the upper part of the head black; sides and back of the neck white,

tinged with straw-yellow; back, tertials, wing- and tail-coverts brownish grey; primaries and tail-feathers almost black; chin, throat and upper part of the belly white; lower part of the belly and under tail-coverts light brownish grey; legs, toes and webs black. In Mr. Sanford's specimen the head appears to be dark dusky brown, rather than black, as stated by Yarrell, and the tail is not so dark as the primary quills. The young bird of the year, according to a description in the 'Zoologist' for 1864 (p. 9365) of an immature male killed at Flamborough Head, in the beginning of September, is sooty black throughout, with a slight shade of brown in some lights; the shafts of the primaries white; the legs, toes and webs inky black.

The egg is said to be of a pale green colour, spotted with ash-grey and dark reddish brown.*

FULMAR PETREL, *Procellaria glacialis*. This companion of the whale-fisher is only a rare autumnal visitor to our coast: the only notice I know of its occurrence in this county is from the pen of the Rev. Murray A. Mathew, in the 'Zoologist' for 1869 (Second Series, p. 1644), in a paper on "The Slaughter of Sea-fowl at Weston-super-Mare." After giving an account of the slaughter of various Gulls by the fishermen of those parts, he says, "Another fisherman shot an old Fulmar, not a common visitor

* Yarrell, vol. iii., p. 637.

to our southern coast." I have, however, myself found this bird on the still more southern coast of South Devon. Yarrell says it has been shot in Cornwall, and sometimes, but not often, on the coast of Wales. Montagu restricts it more to the coast of Wales, as he says, "It is not frequently seen on our southern coasts: we never remember but one instance, and that was in South Wales." These occasional visits to the coast of South Wales, however, bring it nearer to our own coast than either Devon or Cornwall. It is not uncommon on the more northern coast of England and Scotland, and breeds in some of the islands off that coast, making its nest on the grassy shelves of the highest precipices. The nest itself is formed of herbage, seldom bulky, generally a mere shallow excavation in the turf, lined with dry grass and the withered tufts of the sea-pink.*

The food of the Fulmar appears to consist principally of whale-blubber, in order to obtain which these birds follow the whaling vessels for great distances. Yarrell, quoting the Rev. W. Scoresby, says, "These birds follow the whaling ships, joining the ship on its passing the Shetland Islands, and accompanying it to the highest latitude, and keeping an eager watch for anything thrown overboard—the smallest particle of fatty substance can scarcely

* Yarrell, vol. iii., p. 639.

escape it. Though few should be seen when a whale is about being captured, yet as soon as the flensing process commences they rush in from all quarters, and frequently accumulate to many thousands in number." Their appetite and digestion, however, appear to be equal to a much greater variety of food than fat and whale-blubber, as Mr. J. H. Gurney, jun., in a note in the 'Zoologist' for 1868 (Second Series, p. 1482), says the œsophagus of one contained a bird, which he had no hesitation in saying was a Redwing, a fish of some description, a few Gulls' feathers, and also what he believed to be the mandibles of a cuttle-fish. The cuttle-fish appears to be rather a favourite food of the Fulmar.*

According to Yarrell the adult bird has the curved point of the bill pale yellow, the sides horny white; irides straw-yellow; the whole head and neck all round pure white; the back, all the wing-coverts, secondaries, tertials, upper tail-coverts and tail-feathers pearl-grey; wing primaries slate-grey; breast, belly and all the under surface of the body pure white; legs, toes and webs brownish yellow. My specimen, which I picked up alive on the south coast of Devon, on the 30th of November, 1866, is probably a younger bird, as it differs from this description of Yarrell's in a few particulars: the irides

* 'Zoologist' for 1869 (Second Series, p. 1603).

were dark brown; the top of the head and the back of the neck slightly tinged with pale grey, and the secondary quills quite as dark as the primaries. This bird must very nearly have acquired its full plumage; except for the dark irides I should have considered it a full-plumaged bird, as the pale grey on the top of the head and back of the neck might only have been winter plumage, as in the case of the Kittiwake. It must certainly be much further advanced than a young bird, "probably in its second summer," described by Yarrell as having the tip of the bill yellow, the other parts greyish horn-colour; head, neck, back, wings and tail nearly uniform ash-brown; chin, neck in front and all the under surface uniform ash-brown, but paler in colour than the upper surface. This bird is something about the size of the Kittiwake; Yarrell says a little longer—nineteen inches, instead of fifteen and a half inches; the length of the wings the same, twelve inches.

The egg is pure white, but varies in size from two inches seven lines to three inches one line in length by two inches in breadth.

FORKTAILED PETREL, *Thalassidroma Leachii*. This little wanderer of the sea occasionally occurs in this county, even in inland parts of it, during and after very stormy weather. There is one specimen at Cothelestone, which was picked up dead in a ploughed field by the late Mr. Esdaile, after some rough weather in the autumn. It has also occurred

at Weston-super-Mare, and specimens have been taken in all the neighbouring counties, even in those so far inland as Wilts and Gloucester.

The food of this little Petrel consists chiefly of Mollusca, small fish and Crustacea, which it picks up amongst floating sea-weed, and of any greasy substances which are found around fishing-boats or ships out at sea.

The Forktailed Petrel breeds in sandy burrows or in holes in rocks.

There is a peculiarity in the bill of this and of all the Petrels: extending part of the way along the base of the upper part of the upper mandible is a tube for the nostrils; from this tube the bird is said when wounded or angry to emit a nasty-smelling oily fluid. The bill is black; the irides dark brown; nearly the whole of the plumage is sooty brown, approaching to black in places, but growing paler on the wing-coverts and tertials—some of the feathers of these parts are only slightly edged with white; the upper tail-coverts are white; the primary quills are black; the tail is considerably forked and not quite so dark as the primary quills; the under tail-coverts are white on the sides, dark in the centre. This little bird is about the size of a Swift.

The egg is white, of a roundish oval form, large for the size of the bird.*

* Yarrell, vol. iii., p. 673.

STORM PETREL, *Thalassidroma pelagica*. This little Petrel, the last on my list, as well as on that of British birds, is not only the smallest of the Petrels, but the smallest of all the British web-footed birds. I add it to my list on the authority of Montagu, who says that a specimen was killed in the neighbourhood of Bath,* for, like the Forktailed Petrel, this little ocean wanderer is occasionally driven inland, especially in the autumn.

The Storm Petrel, or "Mother Carey's Chicken," as it is called by the sailors, is regarded with a good deal of awe by them as being the sure forerunner of stormy weather. Montagu says that during a voyage to America he noticed two or three small congregations of these birds, and they followed the ship for several hours, flying round and playing about, in the manner of Swallows, frequently stooping to pick up bits of biscuit thrown over for them. Fortunately, however, he adds, "we looked in vain for the accompanying tempest, which these bewitched chickens of Mother Carey were supposed to forebode."

The food of this bird is much the same as that of the Forktailed Petrel,—namely, small fish, Mollusca and Crustacea, to be found in floating masses of seaweed,—and it also accompanies vessels to look out for any edible matter that may be thrown overboard.

* Montagu's Dictionary, by Newman.

The Storm Petrel usually places its eggs in a hole in the crevice of a rock or in a rabbit-hole. Its nearest breeding station to these parts seems to be at the Scilly Islands: it also breeds in considerable numbers on a little rocky island in the Race of Alderney. Mr. Sanford gave me a curious description of a Storm Petrel's breeding station, which he had visited, on a small rocky island off the coast of Galway, called Hii Island: on the top of this island there is a small lake, on the banks of which is an ancient building, like the domed hut of an Esquimaux: the walls of this hut are very thick, nearly five feet, and in the holes in these walls the Storm Petrels bred in considerable numbers, but on no other part of the island, neither in the crevices in the rocks nor in holes in the ground.

The Storm Petrel has the same tubular nostrils at the base of the upper mandible as I have before mentioned. The bill is black; irides dark brown; the head, neck, back, wings and tail are sooty black; the outer edges of the tertials white; upper tail-coverts white; chin, throat, breast, belly and under tail-coverts sooty black; sides of the vent white; legs, toes and webs black. This is a smaller bird even than the Forktailed Petrel, the whole length being not quite six inches. The young birds of the year are not quite so dark in colour; the edges of the wing-coverts are rusty; there is no white on the

margins of the tertials, and less white on each side of the vent.

The egg is oval, and white.*

This last family appears occasionally to be of considerable service to man in various ways, several of the species included in it at times coming inland to feed, and picking up worms, grubs and other mischievous insects, after the manner of Rooks: it also appears that they occasionally do a little damage, but not much in proportion to the good. Besides this they are of some service to the fisherman, by pointing out to him where the shoals of fish are to be found, as where these are, the Gulls always congregate for their own purposes, and thus point out to him the spot where he may cast his net with the best prospect of success.

My labours in regard to the Birds of Somersetshire are now come to an end. I have been able to enumerate as many as 216 different species as having been found in the county; some of them, certainly, mere chance visitors, making their appearance only accidentally or under pressure of very special circumstances; still by far the greater part

* Yarrell, vol. iii., pp. 677, 678.

are either continual residents or regular migrants. The list of British birds, according to the last 'Zoologist List' published by Mr. Newman, contained as many as 395 species, and since that time I see a few others have made their appearance in these islands: we may therefore now count at least 400 species of British birds; I have not been able to claim much over half for Somerset. No doubt to make up the 400 many have been included which have very little right to a place in the British list, only single specimens having occurred; but these single-specimen birds seem from time to time to add to the number of their appearances, as scarcely an annual volume of the 'Zoologist' is published without some addition of this sort taking place, as in the case of the Egyptian Vulture. Though interesting in many ways, these rare visitors are not the birds whose protection or destruction can be considered of much consequence in a utilitarian point of view, but the constant residents and regular migrants, which we can number by thousands, such as some of the Finches, the Thrushes, the Warblers, the Tits, the Swallows, the Crows, and the Pigeons: these are the birds for the destruction of which Sparrow Clubs, poisoned grain and petitions to landlords are set on foot. How little cause there is for such wholesale slaughter, and how far the birds are either rightfully or wrongfully accused, I hope I have in many cases made apparent

by the lists of food I have given in my account of each bird: these lists I have partly made out from what I have been able to gather from the writings of others, and partly from observations I have been able to make myself, either by actual dissection or by watching the birds feed. In this way I have endeavoured to state, as fairly as possible, most of the benefits conferred or the peccadilloes committed, some of these latter indeed by the most useful of the birds; for with them, as amongst Christians, it would certainly be difficult to pick out any perfectly blameless, and perhaps equally so to pick out any entirely mischievous without some redeeming points. It is always upon the balance of good or mischief done that we must decide whether the birds generally or individually are to be considered our feathered friends or foes. I have therefore, as I went on, tried to lay such facts before my readers, so far as the Birds of Somersetshire are concerned, as would enable them to form their own judgment, and in doing so I have always tried to bear in mind Othello's injunction,

“ Nothing extenuate,
Nor set down aught in malice.”

APPENDIX.

THE occurrence of the Hawk Owl in this county had somehow escaped my notice until too late to insert it in its proper place: I have therefore added it in an Appendix, as it certainly ought not to be entirely omitted.

HAWK OWL, *Surnia funerea*. This is a very rare British bird, only two other specimens, I believe, having occurred besides the Somersetshire one: one of these was taken alive on board a collier brig a few miles off the coast of Cornwall, and another British specimen is recorded in the 'Zoologist' for 1866 (Second Series, p. 496). The Somersetshire specimen was shot on the 25th or 26th of August, 1847, about two o'clock in the afternoon (the sun shining bright at the time), whilst hawking for prey on Backwell Hill, near the Yatton Station on the Bristol and Exeter Railway.*

I have taken the following description of the habits of this Owl from a note by the late Mr. Wolley (quoted by Mr. Newman in his edition of

* 'Zoologist' for 1851 (p. 3029), and Montagu's Dictionary, by Newman.

Montagu's Dictionary), who found it not at all uncommon in Lapland: he says, "It flies much in the day-time, and with its long tail, short wings and quiet flight has a very Hawk-like appearance in the air, when its large square head is not seen. Its cry near its nest is also similar to a Hawk's; and it often sits on the top of an old dead fir, to watch intruders, where it seems to have no idea that it can be in danger. It carries itself much after the fashion of the regular Owls; but whilst all the feathers of the back give a great breadth to its full face, there is quite a table at the top of its head. It casts its bright yellow eyes downwards with the true air of half-puzzled wisdom, or turns its head round for a leisurely gaze in another direction; to glance backwards is out of the question and to look at any one with a single eye much beneath its dignity. I have seen it from my window fly down from its stand and take the mouse it caught back to the tree before it began to eat it; but it shifted its place several times before it found a convenient spot for finishing the meal. I do not know whether it is in the habit of hunting on the wing, but this year mice are so abundant that such exertion would be superfluous. When disabled from flight it at once squares itself for defence, putting on its most formidable countenance, guarding its back and presenting its front to the enemy; silently and calmly it maintains its ground or springs from a short distance on its foe—

so bravely it dies, without a thought of glory or without a chance of fame, for of its kind there are no cowards. One day I heard a low noise in the woods which surprised me ; I thought it must be the whine of a dog that was very eager for some animal it could not get at ; I even guessed it might be a wolf. After a careful stalk I came upon a family of Hawk Owls, one of which dropped a mouse as I fired. It was in the day-time ; they were very little alarmed and I could have shot them all. I am told that they breed in 'tyllyns.' 'Tyllyns' are the nest-boxes set up by the Lapps and other inhabitants of the far north for the accommodation of the Golden-eyed Duck, or rather for their own, and it is a case of 'Sic vos non vobis.' "*

The nest is said to be made of sticks, grass and feathers.

The following description is taken from Yarrell :—
" The beak is white ; the irides straw-yellow ; facial disk dull white, bounded on the sides by a semi-lunar dark purplish brown patch extending from the ears downwards ; the head, back of the neck and upper part of the shoulders, mottled with dusky black and dull white ; back and wings dark umber-brown ; lower part of the back barred with dull white ; tertials elongated, loose and downy in texture, covering great part of the wing and barred

* As to the nests set up for the Goldeneye, see p. 512.

alternately with dusky brown and white; under surface of the tail-feathers dusky brown, with six or seven narrow bars of dull white and a broad terminal band of the same colour; chin dusky; throat dull white; across the upper part of the breast a broad band of dull white; breast, belly and under tail-coverts dull white, with numerous narrow transverse bars of dusky brown; under surface of tail-feathers barred alternately with greyish brown and dull white; tail long; tarsi and toes covered with short feathers of greyish white; claws white at the base, tipped with bluish black. The whole length of the bird about seventeen inches," but in this latter particular there seems to be some variation, as the length given in Mr. Newman's edition of Montagu's 'Dictionary' is only fourteen and a half inches; but perhaps this may be accounted for by there being some difference in the length of the tail-feathers, which are said to be as much as seven and a half inches, and also in difference of sex, as the female is said to be somewhat longer, and the plumage is lighter.

The eggs are white.*

* Yarrell, vol. i., pp. 156, 157.

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